

VOL. 79

NO. 6

BUSINESS & PROFESSIONAL  
LIBRARY

Editorial: "Southern Progress—  
A Positive Thing" . . . . . 44

"His Fourth Ace," a portrait of  
Arthur Knox Winget . . . . . 61

Report on 1953 Southern Textile  
Association convention . . . 134

JUN 27 1953

# textile bulletin

JUNE • 1953

## Sectional INDEX

What Others Are Saying . . . . .	30
Editorials . . . . .	44
Watching Washington . . . . .	50
Opening, Picking Carding & Spinning	73
Warp Preparation & Weaving . . . . .	80
Bleaching, Dyeing & Finishing . . . . .	91
Maintenance, Engi- neering & Handling	100
Personal News . . . . .	107
Mill News . . . . .	112
For The Textile Industry's Use . . . . .	114
Saying The Textile Industry . . . . .	121
Southern Sources Supply . . . . .	140
Classified Advertising . . . . .	144



## The Long Lasting Lubricant

NON-FLUID OIL is the made-to-order, long lasting lubricant that stays in bearings and off yarn while ordinary oil escapes from bearings, blackens yarn and rots leather or cork cots.

Today, 7 out of 10 mills use NON-FLUID OIL for top and bottom rolls and saddles of Long Draft frames. The result: they get greater production of clean yarn at lower lubricant cost because NON-FLUID OIL gives longer and better lubrication and does not drip or spatter.

For proof of the performance of NON-FLUID OIL, write for Bulletin T-13 and free testing sample for a convincing demonstration.

## NEW YORK & NEW JERSEY LUBRICANT CO

292 Madison Ave., New York 17, N. Y. Works: Newark, N. J.

SOUTHERN DISTRICT MANAGER: Lewis W. Thomason, Jr., Charlotte, N. C.

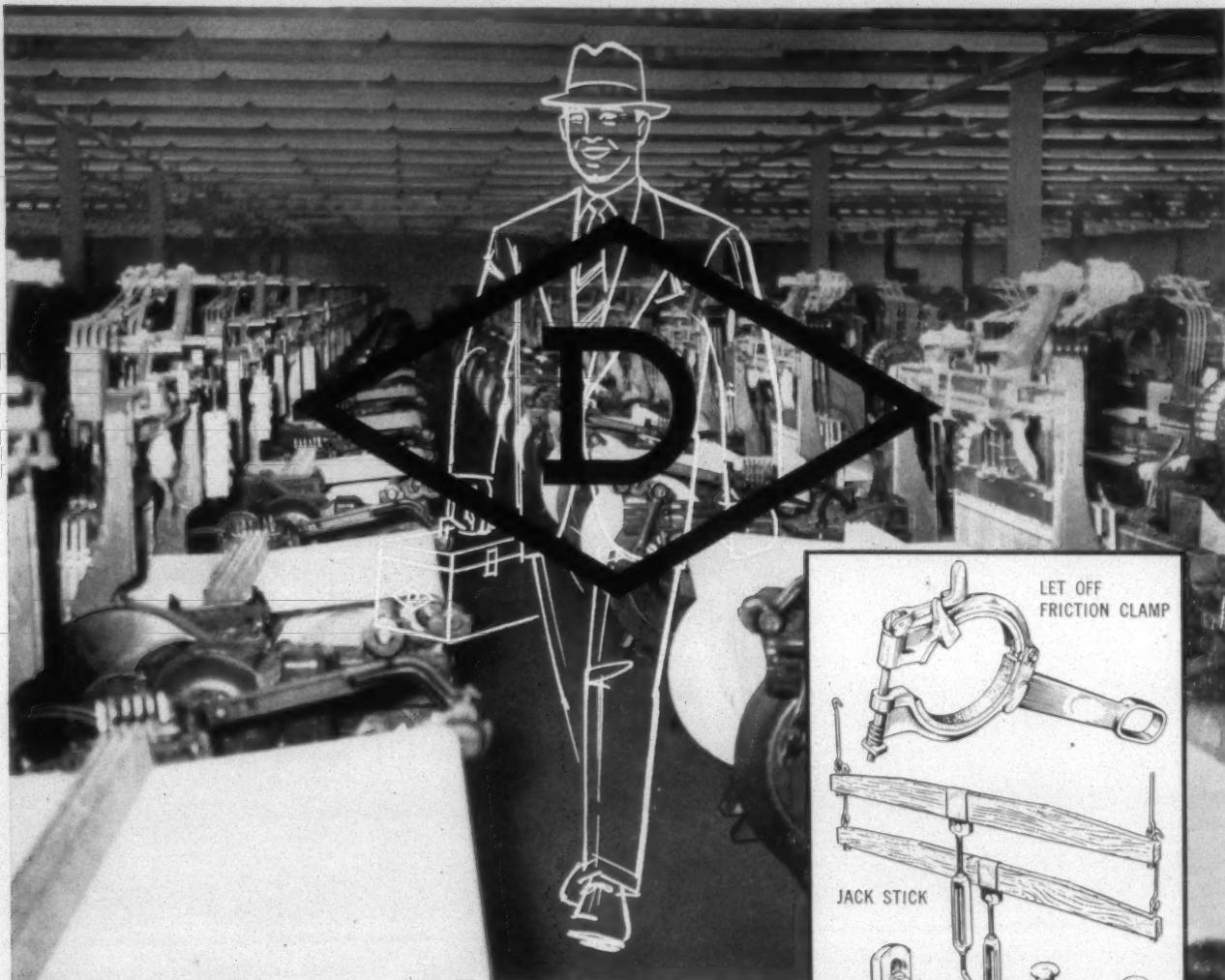
WAREHOUSES: Atlanta, Ga.—Birmingham, Ala.—Charlotte, N. C.—Chicago, Ill.—Columbus, Ga.—Detroit, Mich.—Greensboro, N. C.—Greenville, S. C.—Providence, R. I.—St. Louis, Mo.

NON-FLUID OIL is not the name of a general class of lubricants, but is a specific product of our manufacturer.

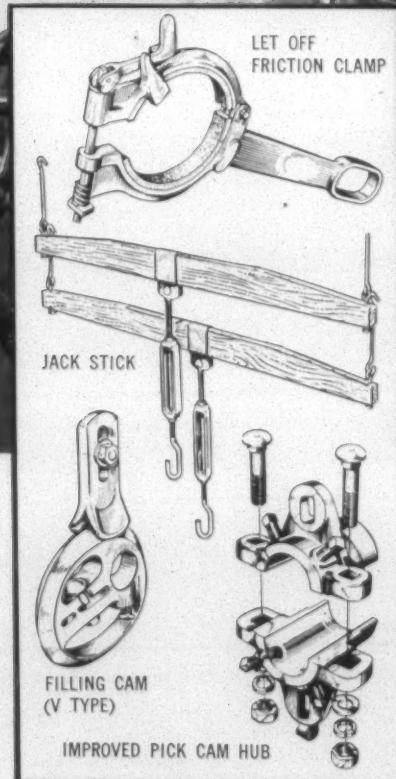


TEXTILE BULLETIN is published monthly by Clark Publishing Co., 218 West Morehead St., Charlotte 2, N. C. Subscription \$1 a per year in advance, \$3 for three years. Entered as second-class mail matter March 2, 1911, at Postoffice, Charlotte, N. C., under Act of Congress, March 2, 1897.

# DRAPER REPAIR PARTS- SERVICE A PLUS FACTOR



Behind the "Diamond D" on your castings stands the Draper Serviceman — a plus factor when you buy Draper repair parts. Be sure you are getting the best. Be sure you are getting the latest. Rely on your serviceman to see that you are getting the most from your parts. His services are yours for the asking.



"Retaining Leadership through Research"

## DRAPER CORPORATION

ATLANTA, GA.      HOPEDALE, MASS.      SPARTANBURG, S.C.

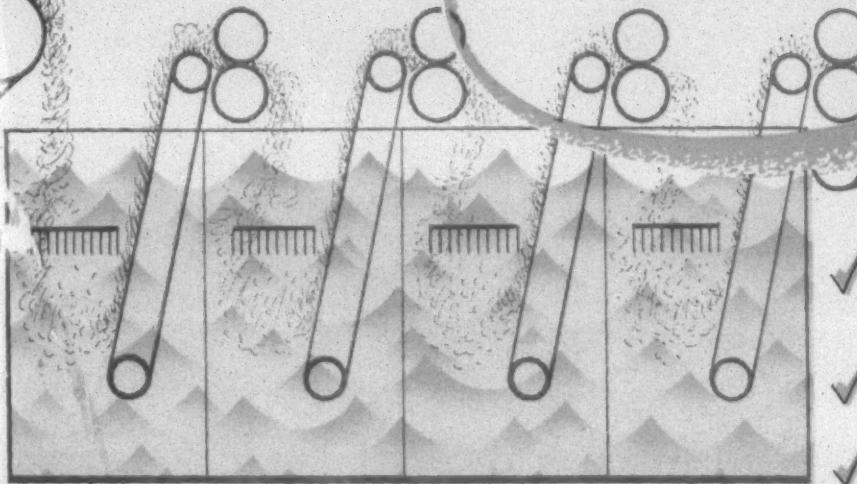
THE WORLD'S LARGEST MANUFACTURER OF AUTOMATIC LOOMS

# FOR ANY TYPE OF RAW STOCK SCOURING

*there's  
nothing like*

## Nacconol\*

AMERICA'S LEADING SYNTHETIC DETERGENT



What you pay for wool scouring agents is important—but the results you get are more important. So when comparing price and performance, remember these simple facts:

Nacconol is the only mass-produced synthetic detergent made by a dyestuffs concern to the exacting standards of the textile industry. Nacconol is bland, neutral, "balanced" . . . has just the right combination of properties for excellent wetting, washing, emulsifying, dispersing in hot or cold solution at any pH. It's an all-around good money value for any wet-processing operation.

Why be satisfied with something "just like Nacconol" when you can be sure of predictable performance by ordering genuine Nacconol from our nearest office.

- ✓ CLEANER WOOL 30% FASTER  
(especially pulled wool)
- ✓ LEAVES LESS THAN 1% RESIDUAL GREASE
- ✓ ELIMINATES BOILING SOAP-STOCK SOLUTION
- ✓ REDUCES WATER REQUIREMENTS
- ✓ NO SOAP-RESIDUE ODOR
- ✓ FREER RINSING UP TO 30% FASTER
- ✓ ASSISTS IN REMOVING ALKALI IN RINSE
- ✓ INCREASE LATITUDE OF OPERATION
- ✓ BETTER DYEING ON WHITER, LOFTIER WOOL

## NATIONAL ANILINE DIVISION

ALLIED CHEMICAL & DYE CORPORATION

40 RECTOR STREET, NEW YORK 6, N.Y. • BOWLING GREEN 9-2240

Boston 14, Mass., 150 Causeway St.  
Providence 3, R.I., 15 Westminster St.  
Philadelphia 6, Pa., 200-204 S. Front St.  
San Francisco 5, Cal., 517 Howard St.  
Portland 9, Ore., 730 West Burnside St.  
Chicago 54, Ill., The Merchandise Mart  
Charlotte 1, N.C., 201-203 West First St.

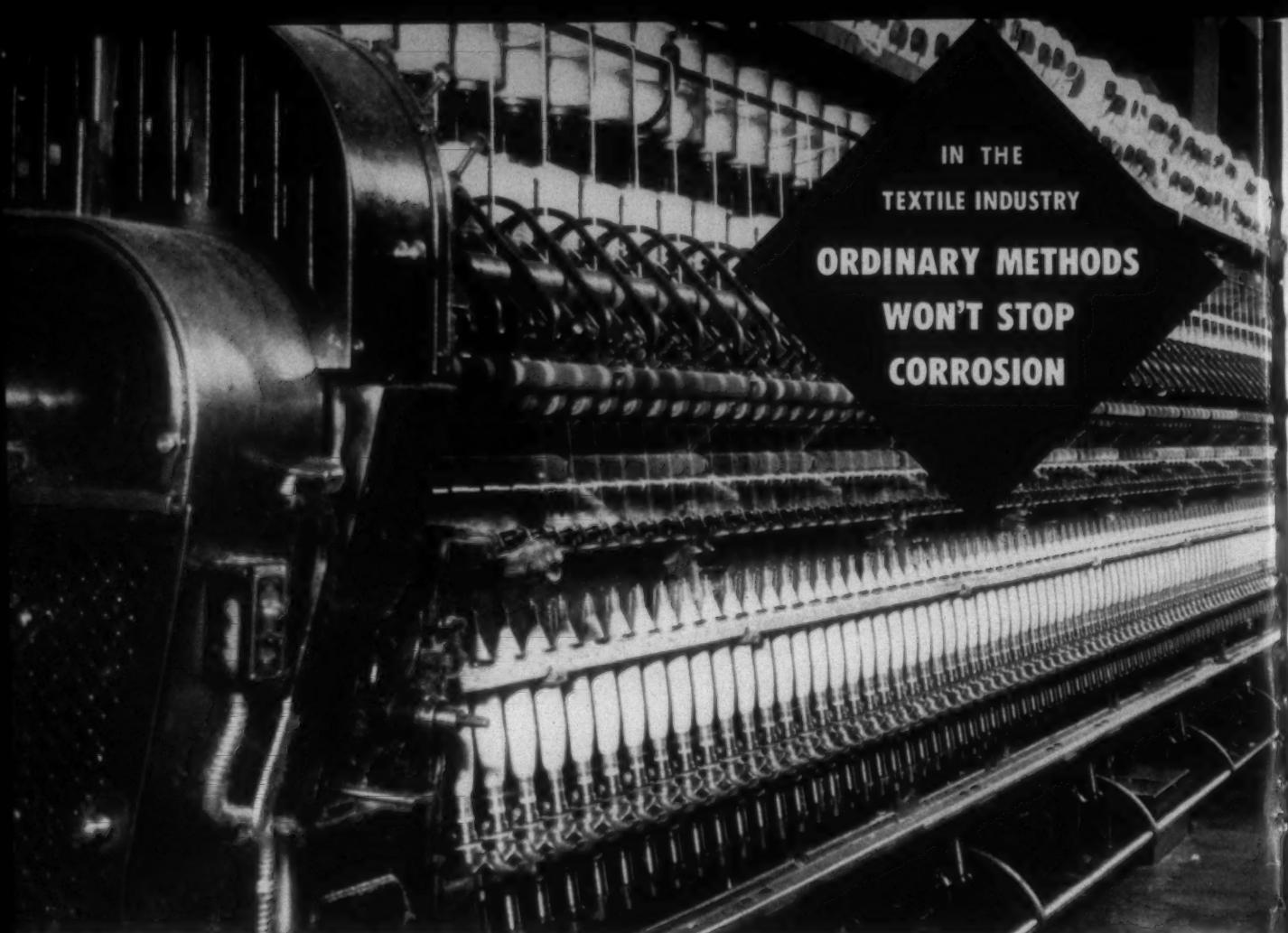
CAPitol 7-0490  
DExter 1-3008  
LOmbard 3-6382  
SUtter 1-7507  
Beacon 1853  
SUPERIOR 7-3387  
Charlotte 3-9221

Richmond 19, Va., 8 North Fifth St.      Richmond 2-1930  
Columbus, Ga., Columbus Interstate Bldg.      Columbus 3-1029  
Greensboro, N.C., Jefferson Standard Bldg.      Greensboro 2-2518  
Chattanooga 2, Tenn., James Building      Chattanooga 6-6347  
Atlanta 2, Ga., 254 E. Paces Ferry Rd.      EXChange 3594  
New Orleans 12, La., 714 Carondelet Bldg.      Raymond 7228  
Toronto 2, Canada, 137-143 Wellington St. W.      Empire 4-6495



\*Reg. U.S. Pat. Off.





IN THE  
TEXTILE INDUSTRY

ORDINARY METHODS  
WON'T STOP  
CORROSION

## SPECIFY THE AMERCOAT METHOD— Designed to Give You PLUS PROTECTION

Ordinary methods for controlling corrosion usually produce the ordinary results—rapid paint failure, costly replacements, product contamination, excess down-time, and hampered production. Halfway measures and the use of one or two general purpose coatings simply cannot provide adequate protection against corrosion's ceaseless attack.

Amercoat gives you a proven method of corrosion control, assuring you proper protection through these PLUS features:

- 1. Careful analysis** by a trained engineer of all the conditions present in each corrosion problem.
- 2. The ONE best recommendation** for the particular problem. AMERCOAT is a complete line of coatings, each formulated to solve or control specific corrosion problems.
- 3. On-the-job assistance** to your applicators and supervisors by a trained engineer. The AMERCOAT method ensures proper attention to surface preparation and application techniques for maximum protection.
- 4. Complete stocks** of fresh materials always near you at one of AMERCOAT's five regional warehouses or more

than 20 franchised distributor warehouses throughout the United States.

**5. Service based on experience.** The AMERCOAT method of corrosion control is the result of nearly 20 years' experience in solving or controlling corrosion problems in every major industry throughout the United States.

Write today for the name and address of the AMERCOAT representative in your area. At no obligation, he will gladly help you analyze your corrosion problems and evaluate your present control measures. If it is determined that you have a problem within our scope of experience, he will outline a complete program of AMERCOAT's PLUS protection for your plant or equipment.





# What's the Biggest Factor



## — in buying maintenance paint?

Is it price or is it cost? Is it what you pay per gallon of paint or what you pay for the job?

Obviously it's the cost . . . what you pay for the job. And that is why it pays to paint with Barreled Sunlight. True, you might have to pay a slight premium on the gallon price for Barreled Sunlight . . . but that premium earns a great big bonus in savings on *both* paint and labor.

Barreled Sunlight takes more thinner, as much as one gallon of thinner for every five gallons of paint . . . paint that gives you more square feet per gallon. You buy less paint.



**SEND FOR THIS NEW CATALOG NOW . . .**  
For full information on all Barreled Sunlight Maintenance Finishes . . . as well as Barreled Sunlight's new and advanced "Engineered Color" Plan . . . write today on your company letterhead for this new Barreled Sunlight Catalog. No charge. No obligation.

You cut the cost of your paint. But of far greater importance, Barreled Sunlight . . . famous for its bright, clean, solid hiding . . . gives you more yardage. It covers more area per brush stroke . . . goes on much easier and faster. It cuts your labor costs . . . often enough to pay for all the paint used on the job.

Yes, and you can prove these points, to your profit, with a simple on-the-wall test which our representative nearest to you will gladly explain at your convenience. Write and he'll promptly call.

**BARRELED SUNLIGHT PAINT COMPANY**

5-F Dudley St., Providence 1, R.I.

**Barreled Sunlight**

**Paints**

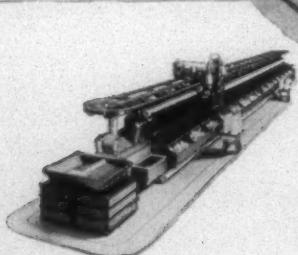
In whitest white or clean, clear, wanted colors,  
there's a Barreled Sunlight Paint for every job

For over half a century those who know the best in paints . . . for all types of buildings . . . have strongly insisted on famous Barreled Sunlight

# FLEXIBILITY



**BARBER-COLMAN**  
*Super Speed*  
**WARPER**



**AUTOMATIC SPOOLER**  
The companion machine, which winds cheeses for the Super-Speed Warper, is the automatic spooler shown above.

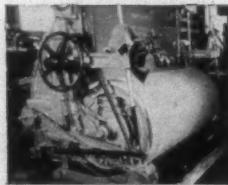


**OTHER TYPES OF BEAMS**  
The Super-Speed Warper is adaptable for slasher beams, dye beams, and balling.

## Featuring...

- ★ Yarn change every set if necessary. No increase in help or down time.
- ★ Automatic let-off produces smooth, uniform beams with any number of ends or count.
- ★ Clock on driving drum measures yardage accurately.
- ★ Takes 16" to 30"-head beams, including dye beams.
- ★ High-speed production, at 900 ypm, requires fewer machines.
- ★ Next set of cheeses loaded inside V Creel while running.
- ★ Floor space, warper and creel, only 28 by 38 feet.
- ★ Creel can be equipped for both cones and cheeses.
- ★ Ends speedily laid into individual comb dents.

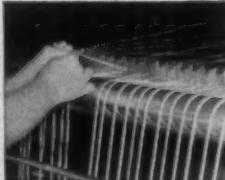
**ATLANTIC CITY, 1954.** Plan now to attend the American Textile Machinery Exhibition, April 26 through 30, 1954.



LET-OFF MECHANISM



CLOCK



COMB

**AUTOMATIC SPOOLERS • SUPER-SPEED WARPERS • WARP TYING MACHINES • WARP DRAWING MACHINES**

**BARBER-COLMAN COMPANY**  
ROCKFORD • ILLINOIS • U. S. A.

FRAMINGHAM, MASS., U. S. A.

GREENVILLE, S. C., U. S. A.

MANCHESTER, ENGLAND

MUNICH, GERMANY

**INDIA**  
Batalboi & Company  
Forbes Street, Fort  
Bombay, India

**MEXICO**  
J. Rabasa  
Isabel la Católica 45-913  
Apartado 7348  
Mexico D.F., Mexico

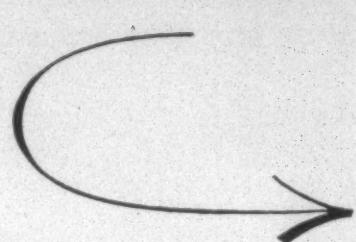
**BRAZIL**  
Quimanil S.A. Anilinas  
e Representações  
Rua Glicério 537/547  
Caixa 5658 e 3431  
Sao Paulo, Brazil

**JAPAN**  
Nippu Trading Co., Ltd.  
Toa Koshin Bldg.  
3-Chome Kitahama Higashiku  
Osaka, Japan

**MIDDLE EAST**  
Arlind Corporation  
65 Bedford Street  
Stamford, Connecticut

for better carding

specify



CARD  
CLOTHING

Good yarns largely depend on the quality of the stock to be carded. Good carding depends on quality Card Clothing.

Eighty-seven years ago soft iron wire and leather foundation were the two basic items used in Card Clothing manufacture. Today specialized hardened and tempered steel wire set with our Tufferizing Process in specially prepared foundations gives you the widest choice and unparalleled quality.

TUFFER PRODUCTS

Card Clothing for Woolen, Worsted, Cotton, Asbestos and Silk Cards • Napper Clothing, Brush Clothing, Strickles, Emery Fillets, Top Flats, Re-covered and extra sets loaned at all plants. Lickerins and Garnet Cylinders from 4 to 30 inches and Metallic Card Breasts Rewired at Southern Plant • Midgley Patented, and Howard's Special Hand Stripping Cards • Top Flat Chains

Yes, today Tuffer Card Clothing gives you that better carding you have a right to expect.

**HOWARD BROS.**

WORCESTER 8, MASSACHUSETTS

A-3

Southern Plants: Atlanta, Ga. and Gastonia, N. C.  
Branch: Philadelphia, Pa. Direct Representation in Canada



**Size with NU-FILM** Your customers won't have trouble in dyeing, stabilizing, or crease-proofing your Greige goods because of incomplete size removal.

**NU-FILM** is a non-congealing warp size. It washes out of fabric with soap and water. Nothing else. And positively no enzymes! Quick, thorough rinsability. Less costly. Faster.

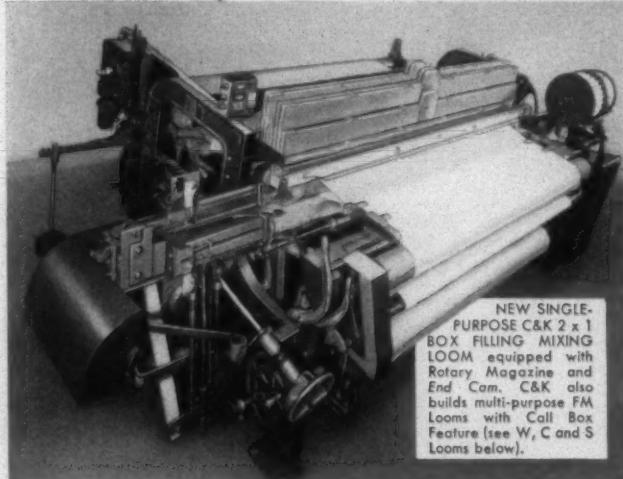
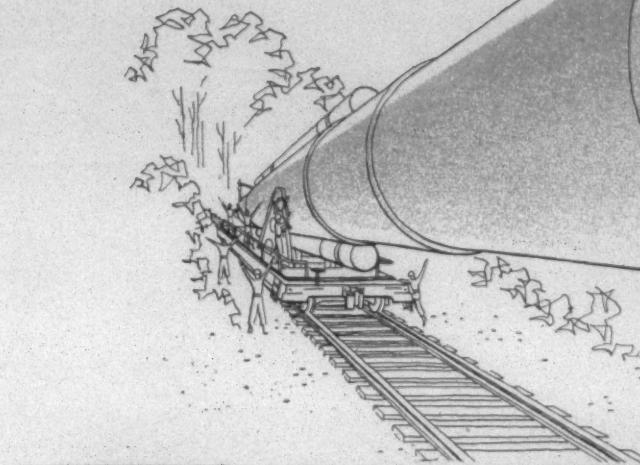
**NU-FILM's** better running properties increase weaving efficiency. NU-FILM cuts loom shedding. Minimizes formation of slubs. It reduces formation of "set marks" . . . does away with "hard size"—virtually eliminates rayon seconds.

Use it on spun rayon blends, cottons, and filament viscose yarns.  
Write for full information.



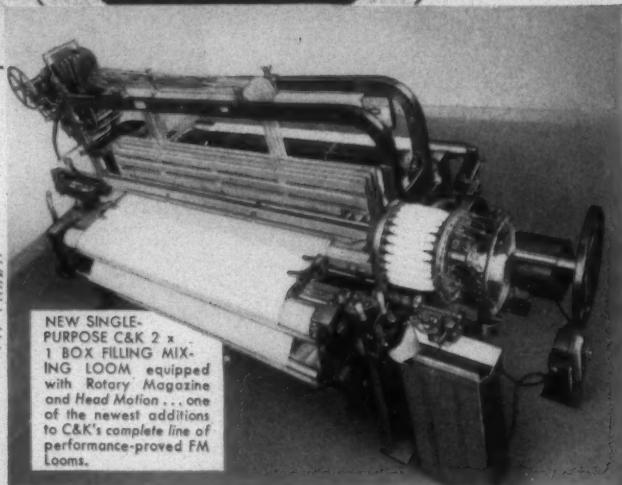
270 Madison Avenue, New York 16; Boston; Providence; Philadelphia; Atlanta; New Orleans, and other principal cities.

In Any  
"BATTLE OF FIBRES"

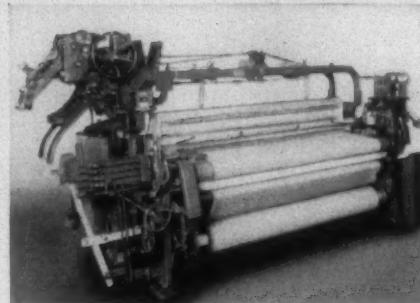


NEW SINGLE-PURPOSE C&K 2 x 1 BOX FILLING MIXING LOOM equipped with Rotary Magazine and End Cars. C&K also builds multi-purpose FM Looms with Call Box Feature (see W, C and S Looms below).

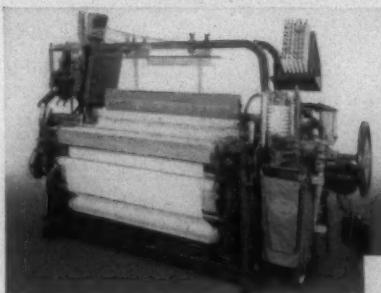
The  
Big Guns are  
**C & K  
LOOMS**



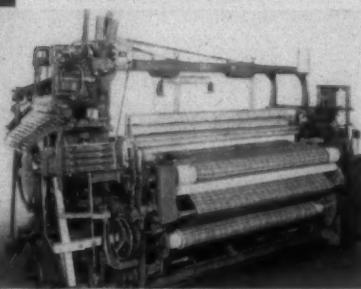
NEW SINGLE-PURPOSE C&K 2 x 1 BOX FILLING MIXING LOOM equipped with Rotary Magazine and Head Motion . . . one of the newest additions to C&K's complete line of performance-proved FM Looms.



W LOOMS for unmatched versatility in weaving woolens, worsteds, upholstery and blended fabrics. Made in all widths . . . bobbin-changing . . . filling mixing . . . tri-color . . . convertible . . . pick and pick . . . and many other features.



S LOOMS are the most modern machines for weaving nylons, rayons, acetates, combinations and pure silks. Built in all widths . . . call box . . . filling mixing . . . bobbin-changing . . . shuttle changing . . . many shuttle sizes . . . pick and pick . . . Jacquard . . . and what other features do you want?



C LOOMS for widest flexibility in weaving cottons, spun rayons and blends for towels, blankets, decorative fabrics, bedspreads, handkerchiefs, shirtings, siftings, dress goods. Built in all widths . . . bobbin-changing . . . shuttle changing . . . convertible . . . tri-color . . . pick and pick . . . leno motions . . . all-purpose take-up . . . 30° beams . . . and many more C&K-engineered advantages.

*Crompton & Knowles*  
**LOOM WORKS**

WORCESTER 1, MASSACHUSETTS, U. S. A.

Philadelphia, Pa. • Charlotte, N. C. • Allentown, Pa.  
Crompton & Knowles Jacquard & Supply Co.,  
Pawtucket, R. I.



This "Invisible Trademark" Stands Back of the  
Trademarks of the World's Finest Woven  
Fabrics



**Ideal High Speed  
Ball Bearing Drawing Rolls\***  
**Shatter All Previous  
Efficiency Records**

Three Ideal units will outproduce five of the best types previously known . . . and produce better yarn as well.

A survey among operators of many hundreds of Ideal units shows an average reduction of 26.9% in variation of drawing sliver, 20.5% in yarn numbers, and a 7.4% improvement in breaking strength. In many cases Ideal units were credited with more than doubling the production per frame. These carefully kept records also showed a reduction of 7.5% in ends down in roving and 27.5% in spinning.

This survey showed such an improvement in performance, efficiency, and yarn quality that old standards can no longer be used. Ideal Drawing Rolls save on original cost, labor, floor space, and maintenance. Don't replace your present drawing rolls until you have investigated the great advantages of Ideal High Speed Drawing Rolls. Write or wire for full information.

**Ideal Industries, Inc.  
Bessemer City, N. C.**

\* patented

3 YEARS IN THE BUILDING! THE MOST MODERN PLANT OF ITS KIND!  
NOW IN OPERATION!

## "CIBA TOMS RIVER"

*the Home of*

CIBANONE<sup>®</sup>  
DYESTUFFS

*"A Great Name for the Best"*  
*in*

ANTHRAQUINONE VAT DYES

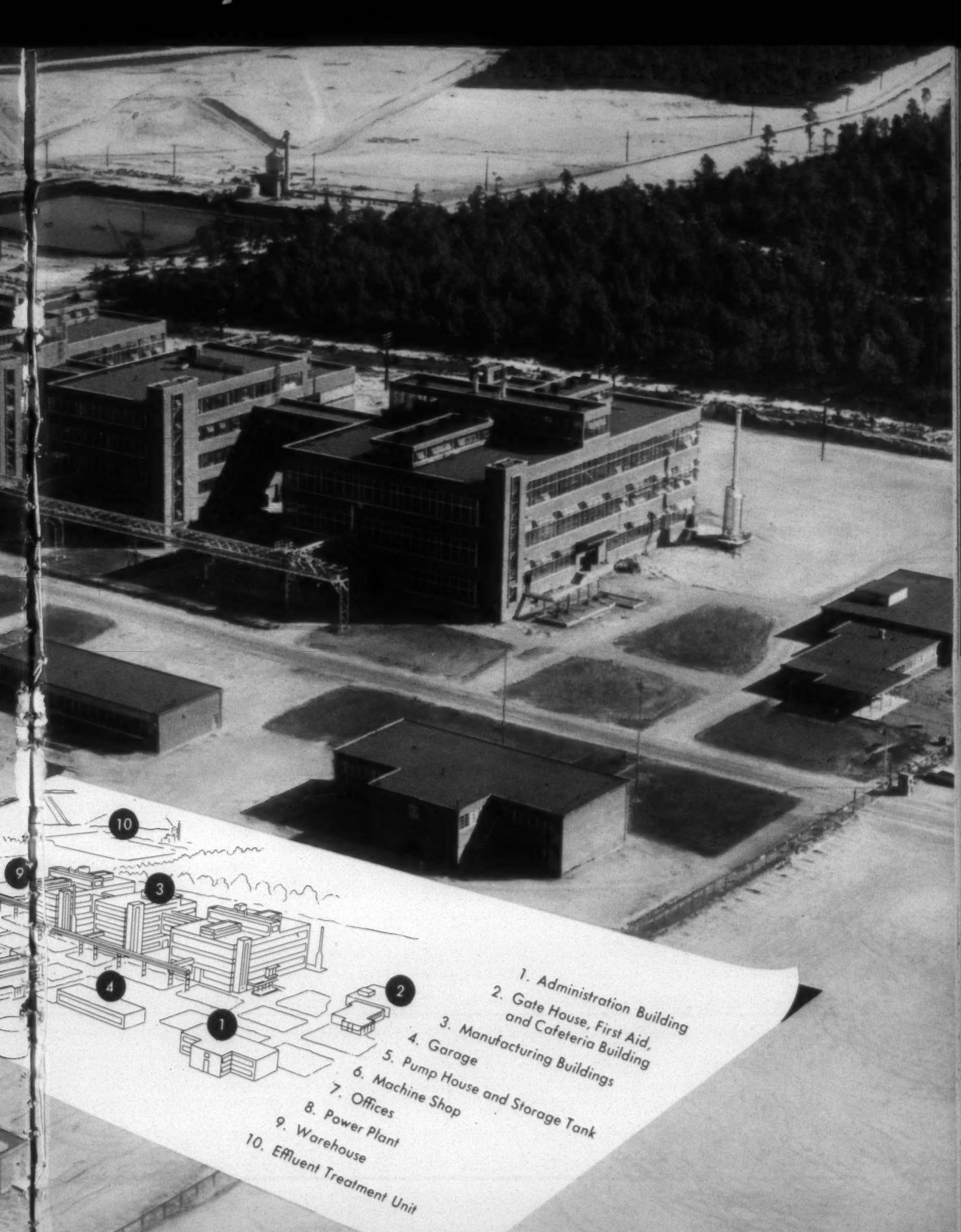


The Toms River Plant  
its products and services  
are illustrated

and described on  
the following pages.



*This is CIBA "Toms River"...th*



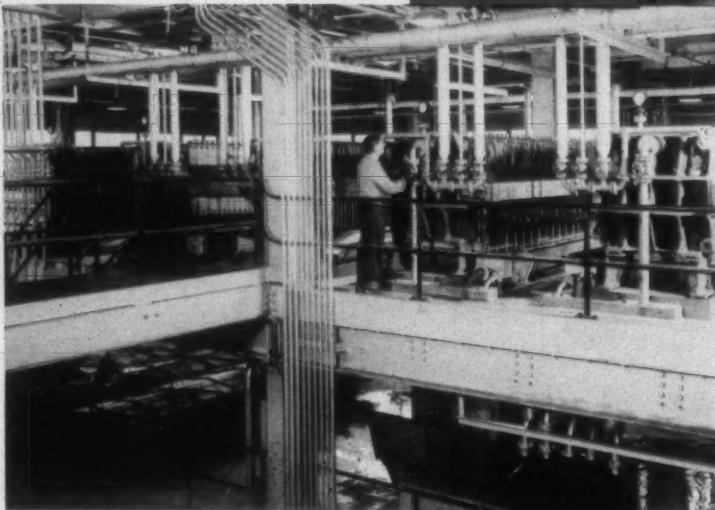
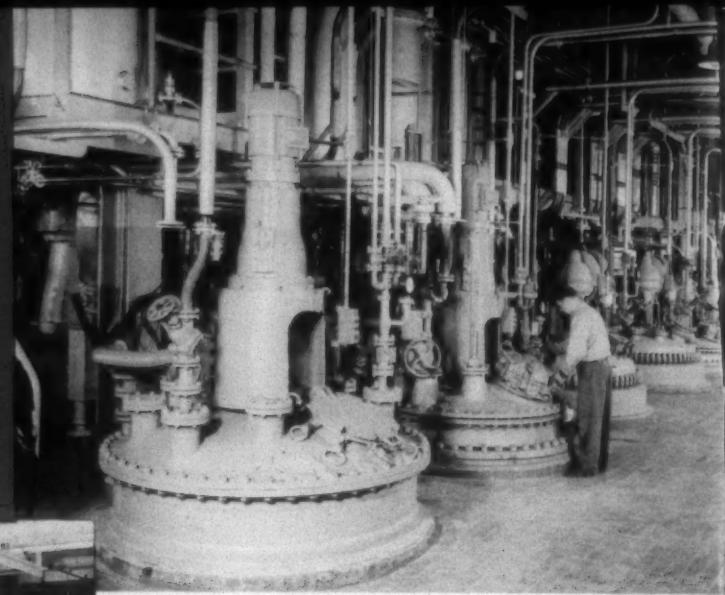
1. Administration Building
2. Gate House, First Aid, and Cafeteria Building
3. Manufacturing Buildings
4. Garage
5. Pump House and Storage Tank
6. Machine Shop
7. Offices
8. Power Plant
9. Warehouse
10. Effluent Treatment Unit

*...the most modern plant of its kind*

## MODERN!

One of the rows of reaction kettles at Ciba "Toms River," the starting point in the complicated process of vat dye manufacture.

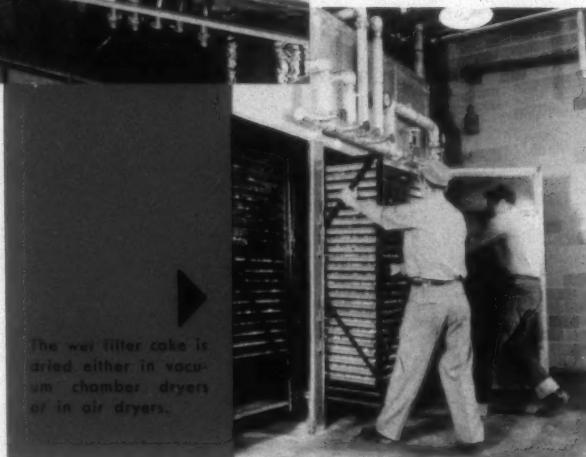
The dyestuff slurries are de-watered in these filter presses. The press cake is the crude dye which is chemically finished and further processed to usable form.



## QUALITY CONTROLLED PRODUCTION!

The wet filter cake is dried either in vacuum chamber dryers or in air dryers.

## EFFICIENT!



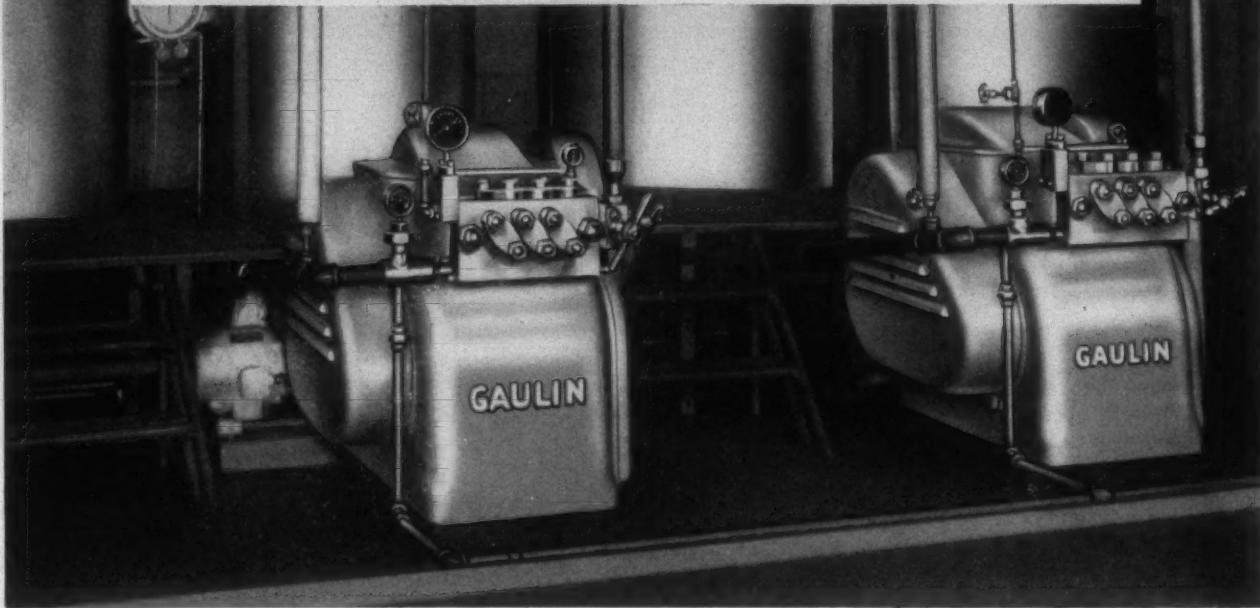
In becoming Ciba's headquarters for greatly expanded production of anthraquinone vat colors, the new Ciba Plant at Toms River, New Jersey, erected at a cost of more than \$17,000,000 and covering an area of more than 35 acres will provide a timely, major extension of product service and technical counsel for users of dyestuffs. Thus will Ciba meet the constantly increasing demand for more dyes of a class that is distinguished for exceptional fastness to light and washing.

LOOK TO THIS  
SUPERIOR SOURCE  
TO MEET YOUR  
VAT COLOR NEEDS

CIBA

Printed in U.S.A.

# Tallassee Switches to Pearl Starch ...and GAULIN Homogenizers



AND HERE'S THE RESULT as told by management of the Tallassee Mills in Alabama:

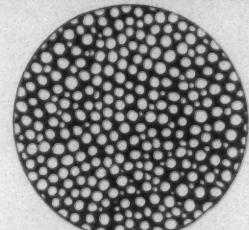
"Since we started to Gaulin-Homogenize our size, we have less shedding at the loom and slasher. Our weave room efficiency is slightly higher. We have a more uniform size that's easier to keep within our weight tolerances. Yet — we've switched to Pearl Starch. We figure the *savings in starch alone* will pay for our two Gaulins in a year."

#### EXPERIENCE IN HUNDREDS OF MILLS

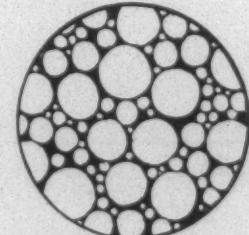
By converting starch mechanically, instead of thermally, a Gaulin Homogenizer furnishes a finer size . . . with a stable and uniform viscosity.

It penetrates yarn lightly but evenly . . . bonds fibers together smoothly, firmly — without coating or matting and making them brittle.

Experience in hundreds of mills proves Gaulin-Homogenized Size costs less . . . provides better pickup . . . makes a *stronger, more elastic* yarn.



Gaulin-Homogenized Starch is fine, regular and evenly mixed.



Boiled Starch is comparatively coarse, irregular and unevenly mixed.



#### SYNTHETICS — WORSTEDS

Mills are now preparing better sizes for Synthetics and Worsteds, too, by Gaulin-Homogenization. Faster, more uniform results are reported at substantially lower costs.

**MANTON-GAULIN  
MANUFACTURING COMPANY, INC.  
66 GARDEN STREET, EVERETT 49, MASS.**

*World's Largest Manufacturer of Homogenizers, Triplex Stainless-Steel High Pressure Pumps, and Colloid Mills*

# Bahan Announces

# A NEW

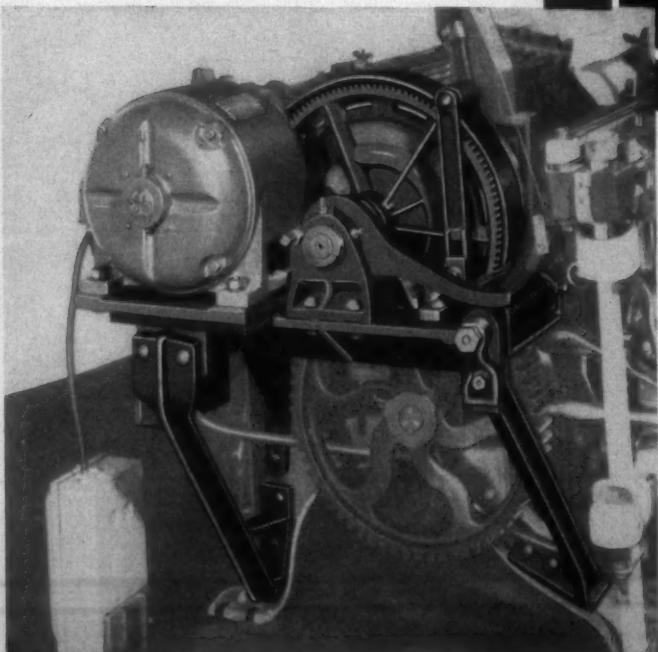
## MAJOR DRAWBACKS OF OTHER LOOM DRIVES ARE ELIMINATED WITH BAHAN'S MODEL D1\*

In the Model D1\*, Bahan has overcome the disadvantages of previous drives. By a new method of grease lubrication and control, grease always travels to the proper points; individual grease channels prevent grease by-passing of bearing point. The general problem of slippage is eliminated by sealing grease from the clutch. By the absence of grease on the driving clutch the required tension is decreased, as compared to other drives. This in turn increases bearing life and decreases the amount of adjustment necessary to maintain efficient operation.

\*Patent Pending

### THE NEW **MODEL D1\***

a motor drive that  
gives maximum  
pulling power with  
minimum tension . . .  
and positively  
keeps grease from  
the clutch.



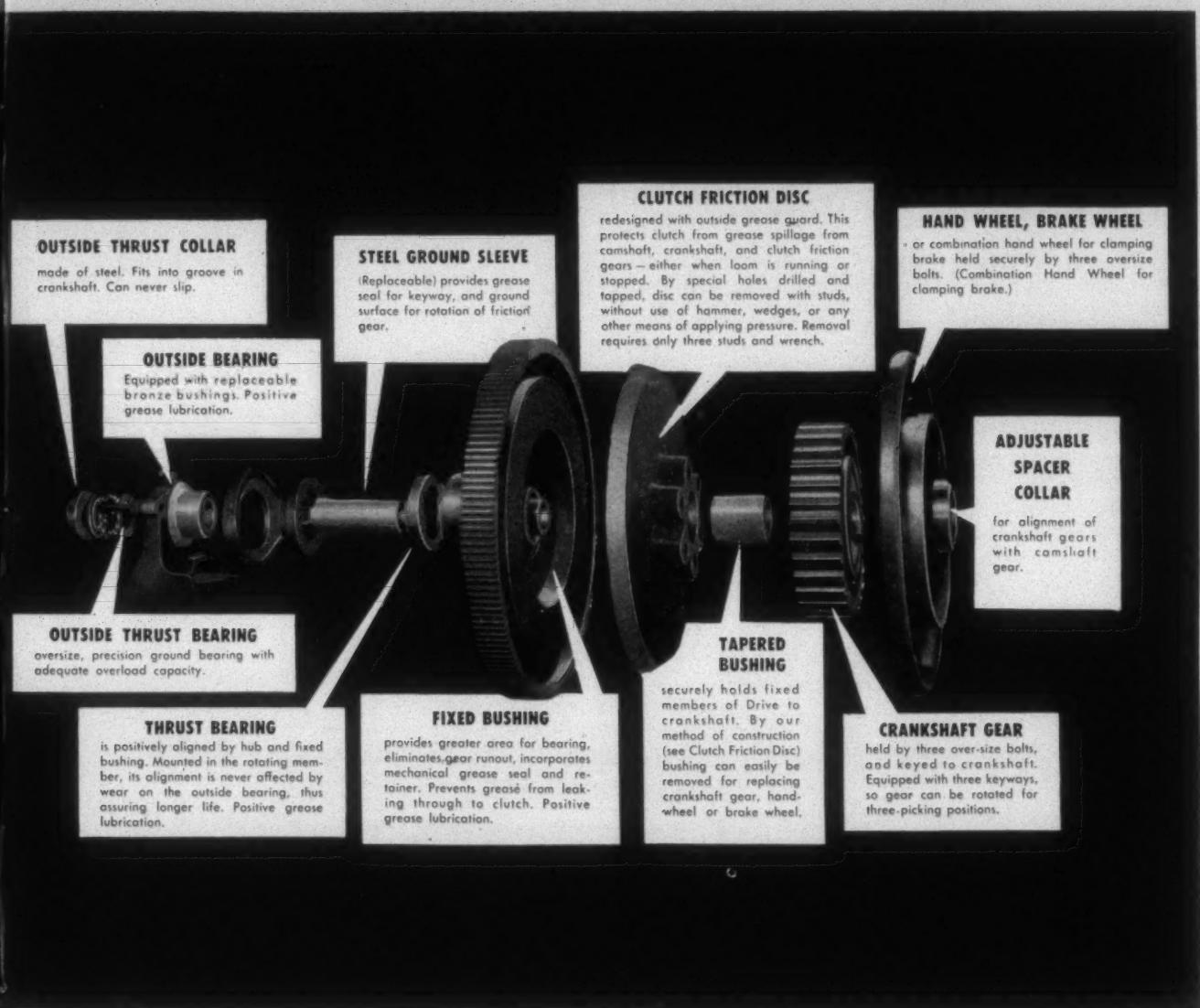
## The Most

Here is proven performance after months of grueling tests . . . the result of years of study, planning and experimentation. This Model D1\* Drive will absolutely eliminate grease troubles and assure uniform loom speeds.

This new Bahan motor drive is practically trouble-free. Its construction reduces the amount of adjustment required by 80% as compared with loom drives of the past.

In Bahan's new MODEL D1\* DRIVE it is impossible for grease to spill or leak through to

# MOTOR DRIVE!



## Dependable Loom Driving Unit Ever Designed!

the cork clutch or to the clutch friction disc. Hence there is no slipping, and no loss of power efficiency.

The Model D1\* Drive, because of its construction, reduces the required amount of tension for operation. This is reflected in uniform loom speeds and greatly increased life of all its parts.

This MODEL D1\* DRIVE is so made that there will never be danger of grease failing to reach some working part. There is POSITIVE

GREASE LUBRICATION for every part which needs grease.

BAHAN MODEL D1\* DRIVES are now available for E-Model, K-Model, and Modified D-Model looms; and they can be adapted for various other models of looms.

We cordially invite your inquiries by telephone, telegraph, or letter.

\*Patent Pending

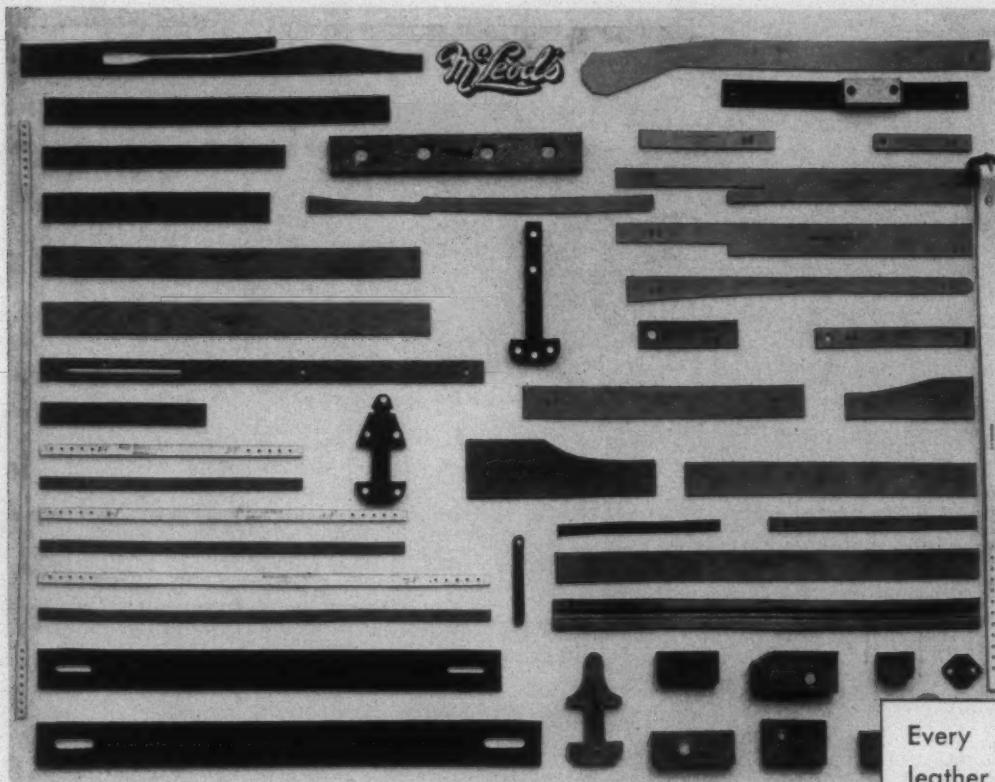
BAHAN TEXTILE MACHINERY CO., GREENVILLE, SOUTH CAROLINA



FOR 33 YEARS

TWO JUMPS AHEAD OF AN EVER-CHANGING INDUSTRY

# Leather LOOM STRAPPING



DESIGNED AND BUILT FOR:  
GREATER PRODUCTION—LOWER OPERATING COST

Every piece of McLeod leather used for strapping is carefully selected for the exact job it must perform.

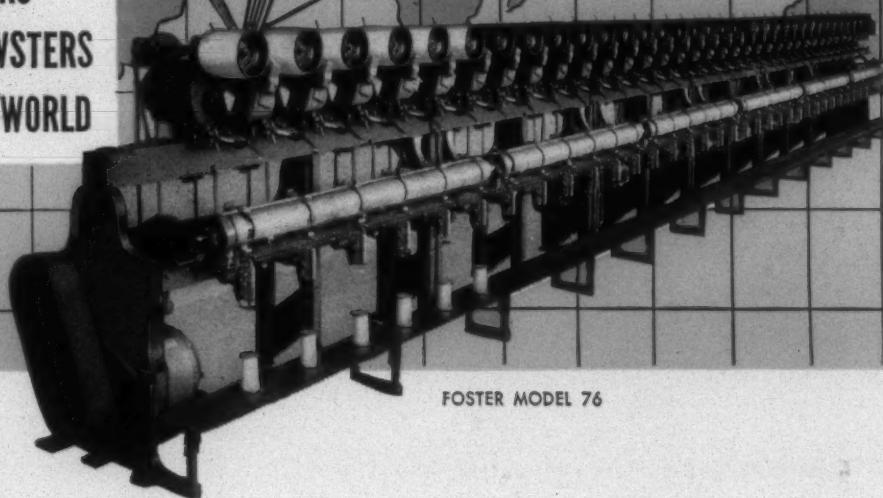
DEPENDABLE  
SOURCE  
OF SUPPLY

*McLeod*  
LEATHER & BELTING COMPANY

GREENSBORO, NORTH CAROLINA

## FOSTER MODEL 76 Nylon Sizing Machine

USED BY LEADING NYLON  
MANUFACTURERS  
AND NYLON THROWSTERS  
THROUGHOUT THE WORLD



The following manufacturers of nylon have large installations of Foster Model 76 Nylon Sizing Machines and also, in many cases, complimentary installations of Foster Model 75 nylon cone winding machines.

1. Algemene Kunstzijde, Unie N. V., Arnhem, Holland
2. Société Rhodiaceta, Lyons, France
3. Societa Rhodiaceta Italiana, Milan, Italy
4. Société de la Viscose Suisse, Emmenbrucke, Switzerland
5. Deutsche Rhodiaceta, A. G. Freiburg, Germany
6. E. I. du Pont de Nemours & Co., Seaford, Delaware
7. In addition we have shipped Model 76 machines and Model 75 machines to numerous nylon throwing plants in Japan, U.S.A., England and other countries.

Bulletin No. A-97 on request.

**FOSTER MACHINE COMPANY**

Westfield, Massachusetts, U.S.A.

Southern office, Johnston Bldg., Charlotte, N. C.; Canadian Representative,  
Ross Whitehead & Co., Ltd., 1475 Mountain St., Montreal, Que.; European  
Representative, Muschamp Taylor Ltd., Ashton - Under - Lyne, England.



FOSTER MODEL 75  
CONING MACHINE

# Woolen Mills Increase Quality of Dayco Rub Aprons and D

## Cleaner, more uniform web is Now Obtainable From Dayco Endless Condenser Tape

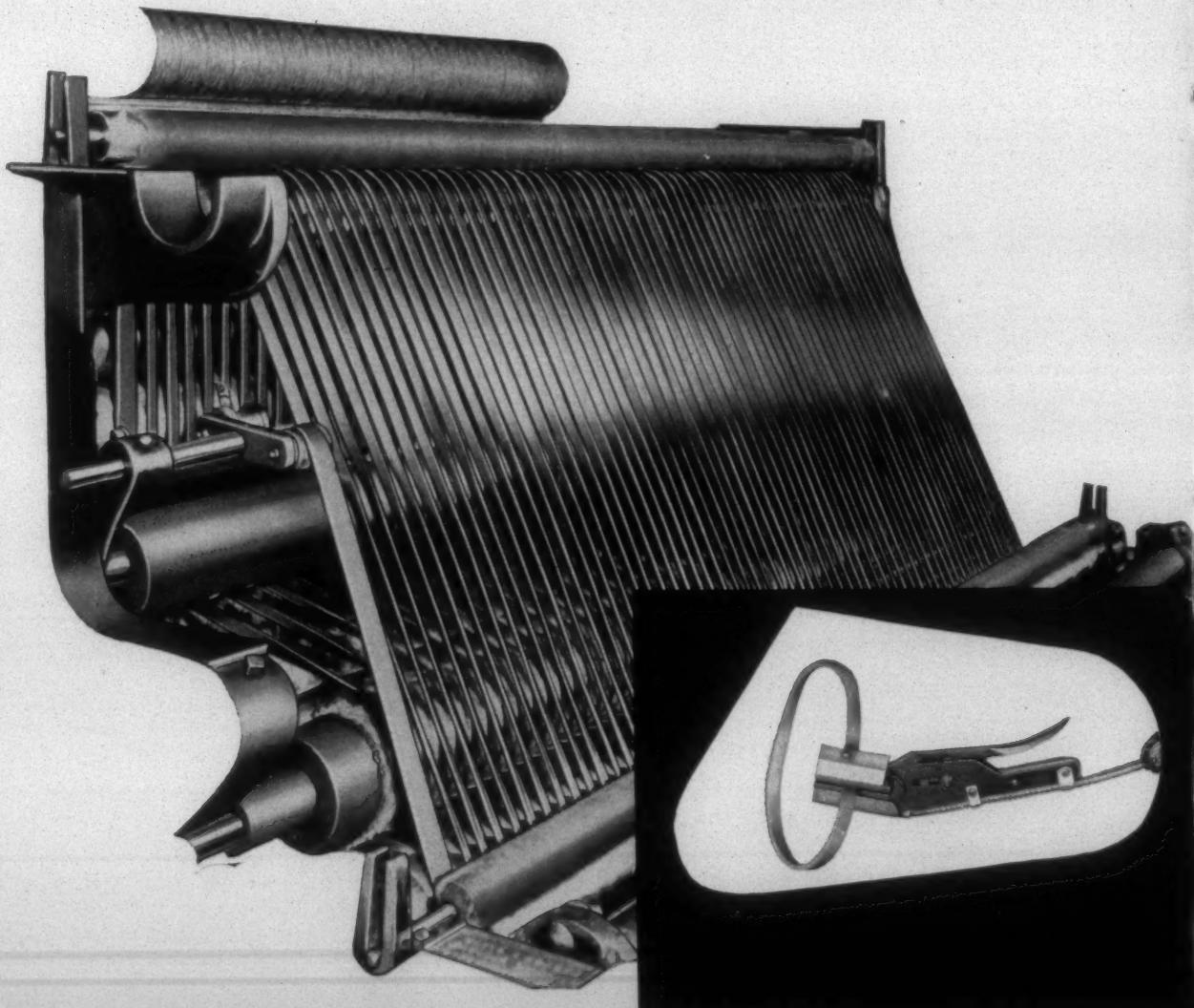
Accurate splitting of the web is assured with Dayco Condenser Tape since it fits the groovings in the steel rollers exactly. This naturally assures more uniform rovings from the card.

Because all stretch in Dayco Condenser Tape has been removed during its manufacture, frequent take-ups by the

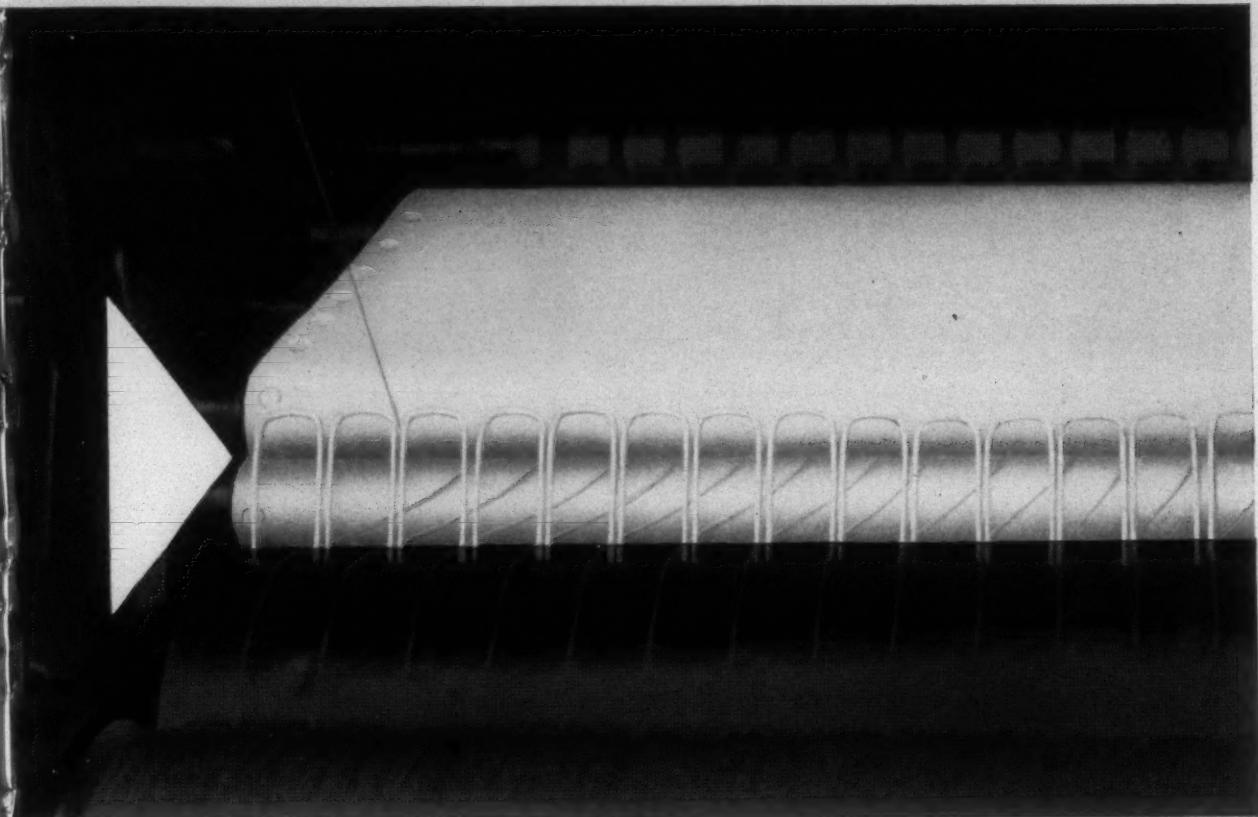
tension device are no longer necessary. This reduces maintenance costs.

Since Daycos have no stretch, they have less tendency to turn over or twist in operation. Also, they are easier to keep clean, are unaffected by oil, and are static free. Daycos have proper coefficient of friction, will not crack, and are made uniform in size to very close tolerances.

To get top quality production from your cards, be sure they are equipped with Dayco Condenser Tape. For further information, get in touch with your Dayco Representative.



# Yarn Production With Dayco Condenser Tape



## Mill Tests Reveal Up to 33% More Uniform Yarn Obtainable with Dayco Rub Aprons

Many mills insist on Dayco Rub Aprons because Daycos enable them to get more uniform yarn from their cards. This is possible because Daycos have a greater co-efficient of friction. And they perform their job without being affected by the abrasion of constant rubbing.

The carefully designed fabric and rubber construction of Dayco Rub Aprons withstands constant flexing with little or no fatigue, thus enabling them to perform effi-

ciently over a longer period of time. This results in fewer shutdowns, reduced maintenance costs and a better production record for each carding machine.

Daycos are trouble-free. They're easy to adjust, and once installed they "stay put." They generate no static, are unaffected by humidity or temperature changes, and absorb no color pigments from dyed wool.

Under actual mill tests Dayco Rub Aprons made it possible to produce 33% more uniform yarn and at the same time reduce eccentric motion as much as 30%. As a result many woolen and worsted mill operators are enthusiastic about Daycos. If you are not already using them, get in touch with your Dayco representative, or write direct to Dayton Rubber.

## Dayton Rubber

*Since 1905*

TEXTILE PRODUCTS FOR BETTER SPINNING AND WEAVING

Dayton Rubber Co., Textile Division, Woodside Bldg., Greenville, S. C.

©D. R. 1953

*Just Like  
Money In The Bank!*



**CHROMIUM  
PLATING  
For All  
Wear Parts!**

**STEADY, IMPORTANT** savings can be racked up day after day when parts you would have tossed away go back to work with a new life-saving jacket of hard chromium plating!

**THINK BACK . . .** how many worn parts have you replaced with new parts that could have been given profitable work life through WALHARD? Your answer will be the best "convincer" possible!

**WORN PARTS** need not represent expended capital. We can show you records to prove that parts formerly given up for dead can put in top performances long after the initial wear surface has been used up.

Make a careful selection of your plater. Part savings mount up handsomely if you choose a competent chromium plater. We submit that our record of experience and proved ability for the past 15 years is the best available anywhere . . . and we invite you to try WALHARD services and compare results!

**WALHARD is the Leading  
Textile Hard Chromium Plater**

**WALTON and  
LONSBURY**  
ATTLEBORO • MASSACHUSETTS

WALTON AND LONSBURY  
81 North Avenue, Attleboro, Massachusetts

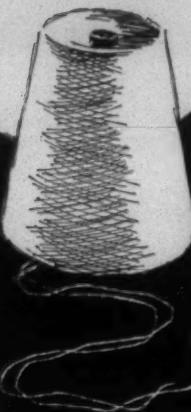
We'd like to read your illustrated WALHARD brochure

Name \_\_\_\_\_

Title \_\_\_\_\_

Firm \_\_\_\_\_

Address \_\_\_\_\_ City \_\_\_\_\_ State \_\_\_\_\_



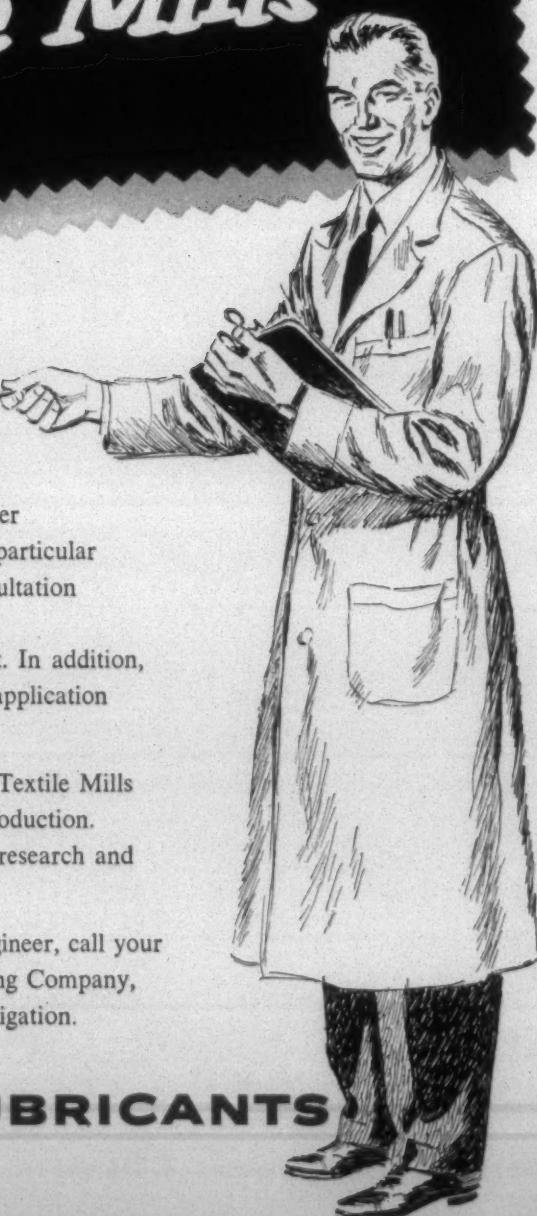
# Sinclair offers Lubrication Counsel to Textile Mills

...Engineers  
give Personal Attention  
to Individual Mills!

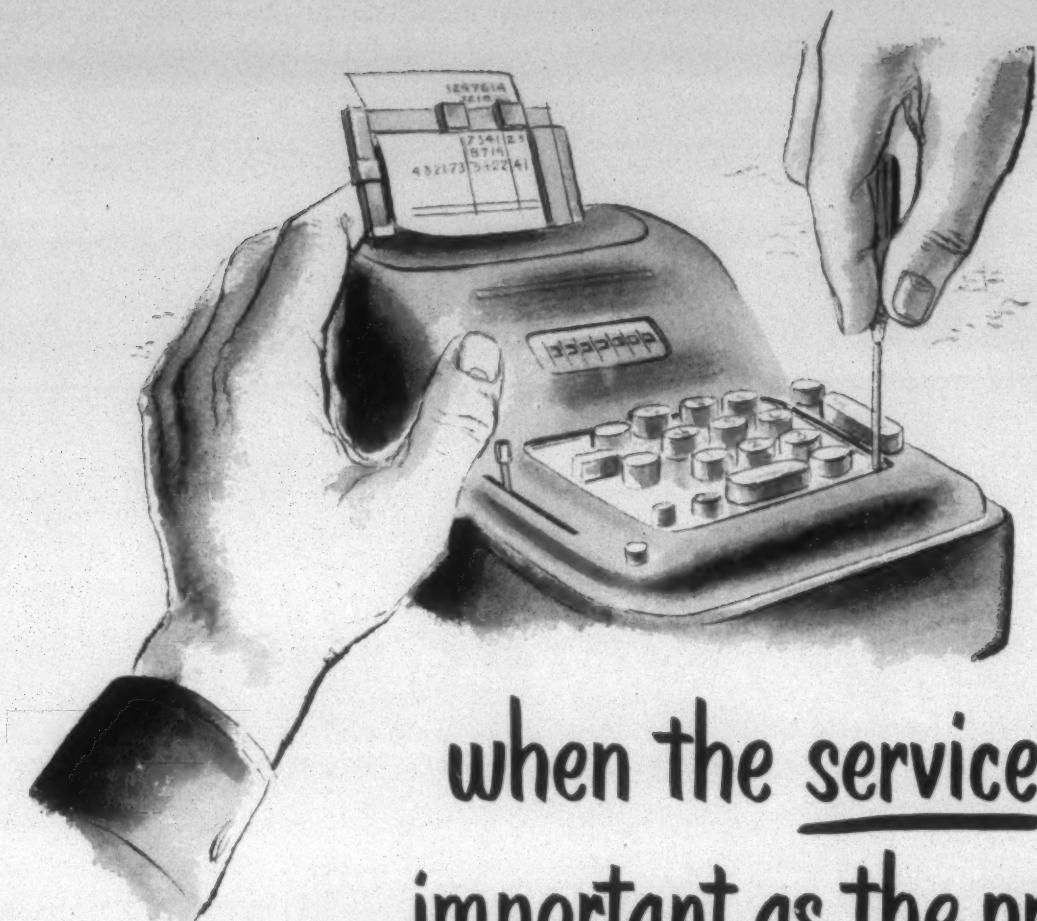
At your invitation, a Sinclair Textile Lubrication Engineer will survey your mill . . . study your machines and your particular lubrication problems. After his thorough study and consultation with your maintenance superintendent, he will prepare a comprehensive, detailed lubrication and procedure chart. In addition, he will brief your personnel about lubricants — proper application . . . handling and storage . . . waste elimination.

Sinclair lubrication counseling has helped hundreds of Textile Mills to retard wear . . . cut maintenance costs . . . step up production. Our representatives are backed by constant laboratory research and industrial experience.

To get the counsel of a Sinclair Textile Lubrication Engineer, call your local Sinclair Representative or write to Sinclair Refining Company, 600 Fifth Avenue, New York 20, N.Y. There is *no* obligation.



## SINCLAIR TEXTILE LUBRICANTS



## when the service is as important as the product

Service is a valuable feature of any modern product. For example: An electric calculator is as useful as an auxiliary brain — but could you ensure its unfailing "sanity," without the service man on call?

In card clothing, too, service is as important as the product itself. Quality alone does not suffice — unless the product is quickly and conveniently available, unless you get the best type of clothing for your purpose, unless efficient installation service is near at hand, and you can count on technical assistance when you need it.

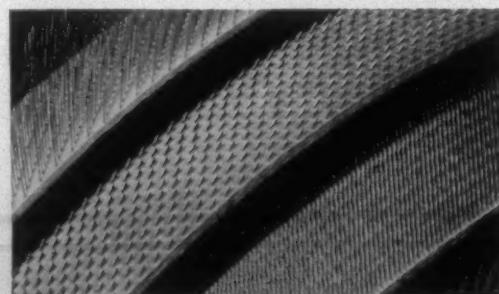
Like Ashworth Card Clothing, Ashworth Service is tops. We have 3 factories, 6 repair shops and 7 distributing points — all strategically located in major textile areas. These assure you of adequate supply, convenient repair service and prompt deliveries.

At any time, you can have our staff of practical card men give you technical advice, survey your cards and recommend necessary repairs. Write to our nearest plant for further information on Ashworth Service.

### ASHWORTH BROS., INC.

American Card Clothing Co. (Woolen Division)  
Fall River†‡      Worcester‡      Philadelphia†‡      Atlanta†‡  
Greenville†‡      Charlotte†‡      Dallas†‡ (Textile Supply Co.)  
Factory\*      Repair Shop†      Distributing Point‡

*Ashworth* CARD CLOTHING  
3 FACTORIES 6 REPAIR SHOPS 7 DISTRIBUTING POINTS



# Here's how you can INCREASE the AMOUNT of SLIVER in coiler cans

GOSSETT technicians were among the very first to come up with a practical, sure way to greatly increase the amount of sliver per can . . . and do it at a moderate cost.

## HERE'S HOW

We'll convert your 10" and 12" comber and card coilers to 14" or 15" and drawing frame coilers to 14" in diameter and to 36" or 42" in height. Just imagine what this will do to increase the amount of sliver per can! What's more, and as the photograph shows, you'll get a perfect lay of sliver in the can.

The GOSSETT MACHINE WORKS has already converted the coilers in a number of leading Southern textile mills. Records show a very substantial increase in the amount of sliver per can. It will pay YOU to look into this amazing innovation.

**Note this:** We show here the percentage increase of sliver when a conversion is made. Take, for example, a 12" x 36" coiler. We'll convert it to any one of the following sizes and here is what you'll get:

Up to This Size	Percentage of Sliver Increase
14" x 36"	60% to 65%
14" x 42"	100% to 105%
15" x 36"	100% to 105%
15" x 42"	120% to 125%

This shows the perfect lay of the sliver in can after coiler conversion from a 12" x 36" size to a 15" x 42" size.

## What we do with COILERS

1. We convert 10" and 12" comber and card coilers to 14" and 15" and drawing frame coilers to 14" in diameter and to 36" or 42" in height.
2. We manufacture all sizes of coilers for all makes of combers, cards, and drawing frames.
3. We manufacture parts for all sizes and makes of coilers.

This coiler was converted from a 12" x 36" size up to a 15" x 42" size, increasing the amount of sliver in can by 120% to 125%.

B. W. GOSSETT, President  
D. W. SMITH, N. C.-Va. Representative

E. C. MASON, Sales Manager

**GOSSETT** MACHINE WORKS, INC.

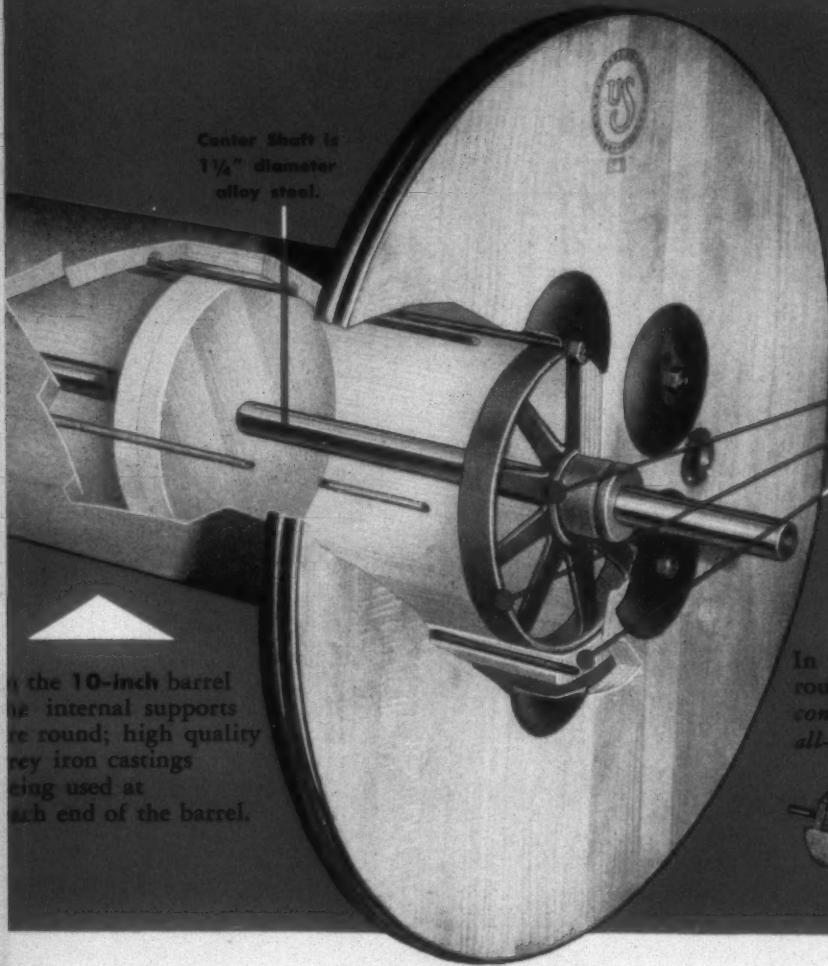
GASTONIA, NORTH CAROLINA



# take a close look at these WARPER BEAMS . . .

Some of the construction features are unique with

Center Shaft is  
1 1/4" diameter  
alloy steel.



In the 10-inch barrel  
the internal supports  
are round; high quality  
gray iron castings  
being used at  
each end of the barrel.

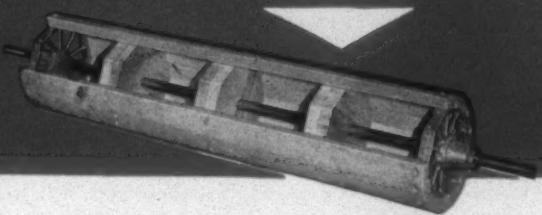
## 3-POINT SUPPORT FOR THE BEAM HEAD

The head is bolted with tie rods  
firm and flush against the

- shoulder at hub of casting
- periphery of casting
- ends of staves

All U S Warper Beams have this  
feature, which provides additional  
resistance against deflection during  
the build-up of the beam.

In the 12-inch barrel the internal supports are not  
round, but are of a ten-sided design for extra  
construction strength. At each end of the barrel  
all-aluminum castings are used.



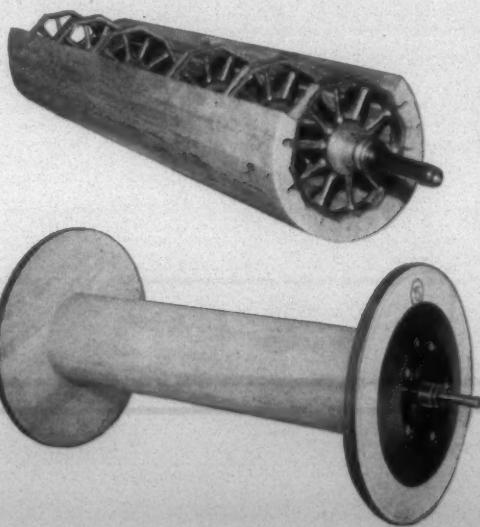
HERE ARE SOME *plus features* FOUND IN

## HIGH TENACITY **RAYON** TIRE CORD WARPER BEAMS

**Internal Supports** consist of six all-aluminum castings,  
offering great strength with lightness in weight.

**Beam Heads** are maple, 1 3/4" thick, four-ply cross-laminated  
at 90°, which has been proven to be the strongest construc-  
tion for high tenacity rayon beams.

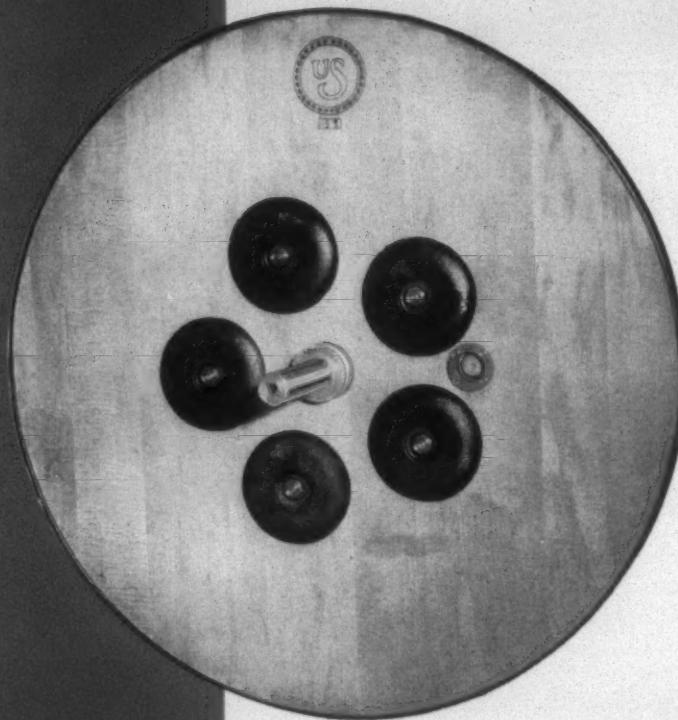
**Reinforcing Tension Plates** are 20" in diameter, of 1/4"  
alloy sheet steel. The engineered dished-form design enables  
the beam heads to withstand tremendous pressure by varying  
the torque on the tie rod nuts. The feathered edge on those  
plates avoids damage when "nesting" the beams.



for

# COTTON

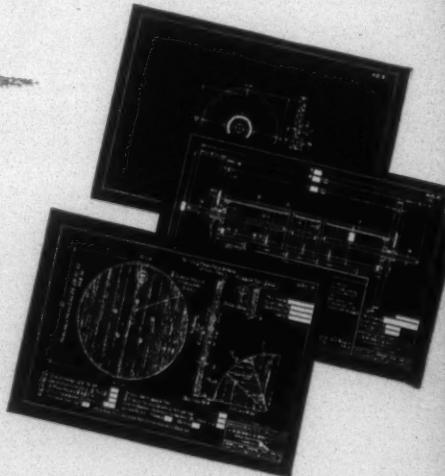
and HIGH TENACITY **RAYON** TIRE CORD



- 1 **Five cast iron tension plates**, bolted onto heavy steel tie rods, can be *individually tightened* to relieve stress or strain on any section of the head. These plates have a *tapered edge*, thus preventing any possible damage when the beams are "nested" for storage.
- 2 **Heads** are 3-ply cross-laminated seasoned hardwood,  $1\frac{1}{2}$ " thick.
- 3 **Tires** are extra heavy ( $3/32$ ") steel . . . grooved, heated and shrunk-fitted onto the heads for tighter assembly.
- 4 **For rugged barrel construction**, the three additional internal supports are  $2\frac{3}{4}$ " thick, made of 2-ply Eastern Pine, at  $90^\circ$  angle. Barrel staves are kiln-dried Eastern Pine.
- 5 **Substantial saving in weight** of both beams is accomplished through the use of the five cast iron tension plates. Further weight saving in the 12" beam is brought about by having the two *aluminum end supports* in the barrel.

#### SEND FOR SET OF BLUEPRINTS

On request, you will receive by return mail a set of drawings showing the detailed construction features of U S Warper Beams, Beam Heads, and Tension Plates. Please specify whether you wish them for **COTTON** or for High Tenacity **RAYON** Warper Beams.



## U S BOBBIN & SHUTTLE CO.

#### Manufacturing Plants

LAWRENCE, MASS. • GREENVILLE, S. C. • KEENE, N. H.

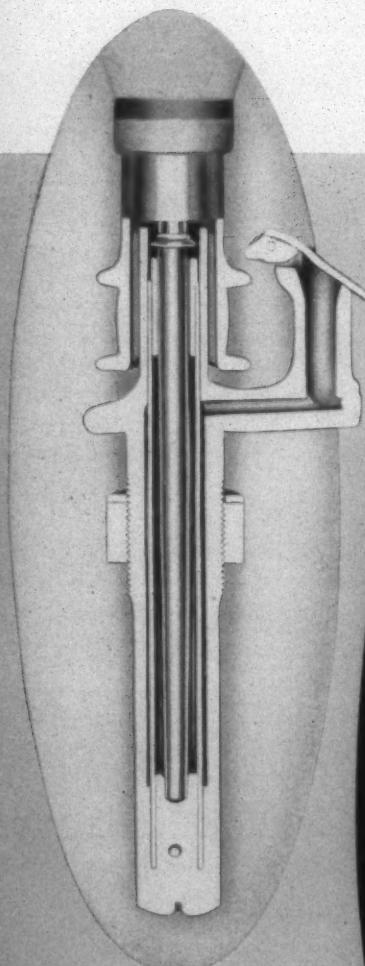
General Sales Office LAWRENCE, MASS.

Southern Division Headquarters So. Carolina National Bank Bldg., GREENVILLE, S. C.  
CHARLOTTE, N. C. JOHNSON CITY, TENN. FORT MILL, S. C. LaGRANGE, GA.  
PHILADELPHIA, PA. PROVIDENCE, R. I. MINNEAPOLIS, MINN.  
DALLAS: O. T. Daniel, Textile Supply Co. LOS ANGELES: E. G. Paules, 1762 W. Vernon Ave.  
CANADA: W. J. Westaway, Montreal, Que., Hamilton, Ont.

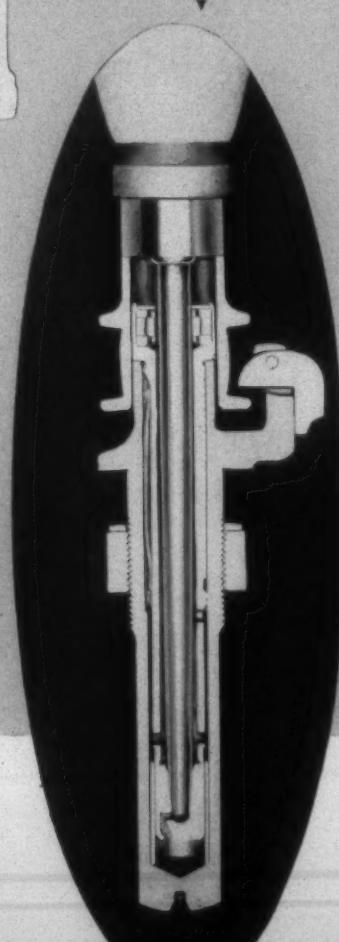


*You can reduce spinning costs*

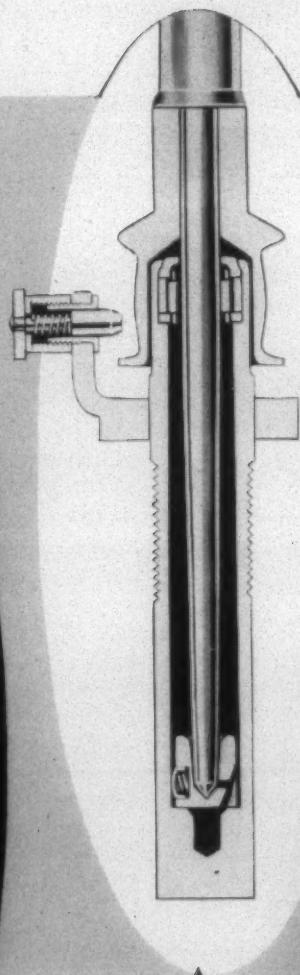
with **Gulfspin,**  
*the only spindle oil that*



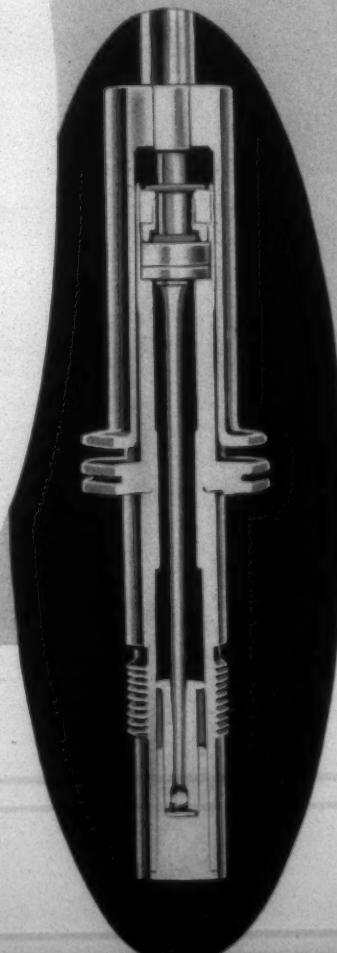
Spindle with sleeve-type bearing. Because it will not thicken in service, Gulfspin keeps power consumption low.



Spindle with roller bearing. Gulfspin prevents rusting and wear, reduces ends down.



Sealed spindle with roller bearing at top and plain foot-step bearing. Gulfspin's high resistance to oxidation and deterioration makes it ideal for this application.



Spindle with spring-type vibration dampening device. Absence of sludge with Gulfspin insures proper dampening at all times.

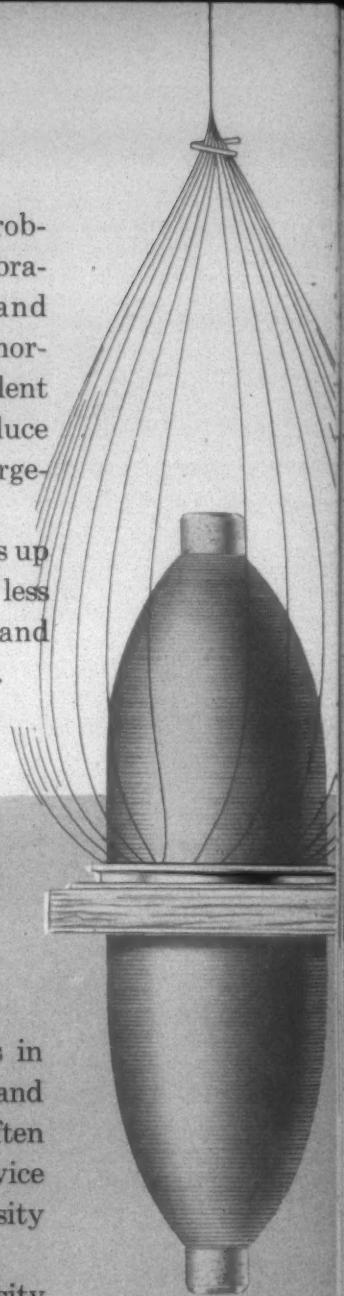
# 1

## Keeps spindles and bolsters clean ... no deposits of any kind

Gulfspin works three ways to keep spindles absolutely clean. First, it has the inherent ability to resist sludge formation—it's oxidation stabilized. Second, Gulfspin prevents contaminants from depositing on spindle parts. Third, Gulfspin provides effective protection against rust, especially important in cast-iron bolsters where rusting causes bolster wear and discoloration of the lubricant.

Because deposits are not a problem with Gulfspin, spindle vibration is kept to a minimum and dampening devices function normally. Gulfspin also has excellent oiliness characteristics, which reduce the rate of wear and prevent enlargement of spindle clearances.

This kind of performance adds up to smooth spindle operation, less vibration, fewer ends down, and rock-bottom maintenance costs.



# 2

## Prevents increase in power consumption ... does not thicken in service

When we remember that spinning frames may consume as much as 60% of the total power used by a textile mill, it is evident that appreciable savings in power consumption here are worth while.

For spindle lubrication, equipment manufacturers and lubricant suppliers recommend oils of low viscosity which will have the necessary film-forming properties and dampening effects. But what if this carefully selected viscosity increases

appreciably when the oil comes in contact with dirt, lint, water, and oxygen? Ordinary spindle oils often thicken after a few months of service and may show a gain in viscosity of 10 to 20 Saybolt Seconds.

Such an increase in oil viscosity results in a power increase of about 1 watt per spindle, 200 watts per frame, 20,000 watts per 100 frames! Converted to dollars and cents, this might total a substantial sum.

Save on power with Gulfspin!



**Gulf Oil Corporation • Gulf Refining Company**  
1934 Gulf Building, Pittsburgh 30, Pa.

TB

Please send me, without obligation, a copy of your pamphlet entitled "Gulfspin."

Name.....

Company.....

Title.....

Address.....

## The Battle Of The Fibers

**G**RATER public interest is centered in the textile industry today than at any previous time in the history of this very old industry. This is due to the war of fibers now being waged in the advertising pages of America.

Only six per cent of the market is now held by man-made synthetic fibers, but their makers, eagerly competitive, are after more even before their production can possibly warrant it.

The situation, because of so many expensive words being bandied about, is rather complicated. No one, not even in the textile mills, knows very much about the new fibers as they are blended into fabrics, nor what they will do for, or against, the user. So we propose to add to the general confusion by making our own interpretation of it, based on some rather intensive reading of trade and business papers recently.

Chemical fibers are not new to the industry, as rayon has been utilized for a number of years. This is a "re-generated" fiber, as distinguished from "synthetic." It is made in three different forms—viscose, acetate and cuprammonium. These fibers are made from cellulose, coming from wood, cotton and other of the other materials found in nature. The new synthetics are made directly from chemicals and not by using as bases any fibers found in nature.

Considerable publicity has been given these new synthetics, even to the extent of designating them as "miracle" fibers. This is probably not strange or unexpected, as it is estimated that it requires about \$30,000,000 to bring one of these new synthetics from the laboratory to the actual production stage. It is perfectly natural, therefore, that manufacturers of these fibers should prepare the public for their reception and also that they make sure that they can readily purchase materials from which such fibers are manufactured.

At the present time either in production or immediately contemplated production there are listed under synthetic fibers 16 different fibers including rayon, glass and nylon. It is estimated that in 1953 six of the newer

synthetic fibers will each have a production of over 20,000,000 pounds. They are Orlon, Dacron, Acrilan, Dynel, Saran and Vicara.

What can the public reasonably expect from these new synthetic fibers? That is the question everyone wants answered—even the textile mill men. There is no question but that the properties of many of these fibers are very attractive from the standpoint of wear, resistance to moths, mildew and the absorption of moisture. On the other hand, it is very possible that some of these properties may not be an unmixed blessing and it will take some time to work out the proper use of each of them. The natural fibers, let us not forget, have many good qualities which are hard to duplicate in a man-made fiber. There is also the question of price to consider.

Of the fibers we have mentioned, some are made in both filament and staple. Acrilan, Dynel and Vicara are made only in staple. At the present time some of the filament yarns are being woven straight into fabrics but most of the staple is being blended with the natural fibers or with other synthetics. Some straight staple is being made into yarn for either knitting or weaving but the greatest attention is being paid to blends where the advantages of both the natural yarns and the synthetics can be utilized. A large number of blends are being experimented with, containing anywhere from five to 60 per cent of the synthetics with cotton, wool and other fibers.

There seems to be little disagreement with the statement that the brightest future of these synthetics lies in blends. But what percentages are necessary to enable the blend to reflect a needed characteristic of the fiber being added? They don't know yet. Sometimes almost up to 100 per cent, sometime a tiny five per cent, depending on the qualities sought. For example five per cent may help abrasion resistance.

Another factor is the cost; high unit prices on present small volume makes it uneconomical to use certain fibers, and the supply isn't there anyway.

The public, naturally, is greatly interested in what can be expected from fabrics made from the new synthetics,

but the only data available deals with the physical characteristics of the fiber. These include fairly specific and measurable facts in regard to strength, water absorbency, and resistance to heat, chemicals, moths, mildew, etc. While these fiber characteristics can be definitely stated, it does not necessarily follow that they will be imparted to blended fabrics in their entirety.

Of the synthetics mentioned, with the exception of Saran and Vicara, the tenacity of these fibers per denier is about twice that of acetate rayon. All of the fibers, with the exception of Vicara with 25 per cent, have very low water absorbency, ranging from one-tenth of one per cent to two per cent. Nylon has a water absorbency of 6.1 per cent, whereas rayon has, in the case of acetate, 14 per cent and viscose 27 per cent.

With the exception of nylon these fibers do not stretch very much. All of them are highly resistant to moths and mildew. The property of low water absorption combined with low elongation give the fiber the property of retaining creases and resisting wrinkling even under comparatively high humidity conditions. The consumer, therefore, may expect fabrics which will retain their shape and also dry out rapidly after being exposed to moisture conditions, provided enough of the fiber is incorporated in the particularly fabric to assure this property.

Most of these new synthetics are highly resistant to the ordinary chemicals, such as alkalies and acids, which readily destroy both the natural fibers and rayon. It can be expected, therefore, that clothing made of these fibers for use in places where exposure to these chemicals occurs will be much more durable and satisfactory.

Practically all of these fibers are very stable under aging conditions, exposure to weather, sunlight, etc. Nearly all of them are of a plastic nature; they melt at certain temperatures before they will burn, but these temperatures, in most cases, are higher than would be encountered in normal usage.

It can be readily seen that these new fibers have a great many advantages if they can be utilized properly. Not all of these properties are desirable in every type of fabric. For example, it is very advantageous to have a suit of

## SEYCO Products

### WARP SIZING

Softeners  
Binders  
Penetrants  
Ty-In Penetrants  
Shuttle Dressing

### WET PROCESSING CHEMICALS AND AUXILIARIES

Dye Assistants  
Penetrants  
Rewetting Agents  
Sanforized Fabric Oils  
Detergents  
Scouring Agents  
Softeners

### NIAGARA TWIST-SETTER

Yarn Conditioning  
Penetrants



"NO, YOU DOPE, I SAID THE HARNESS FOR THE DOBBY!"

Of course you need the right materials for *your* job. The SEYCO man knows the best product to use for your conditions. He's an old hand at the game.

Call him today.

**HEADQUARTERS FOR TEXTILE CHEMICALS**

# SEYDEL-WOOLLEY & CO.

TEXTILE CHEMICALS  
748 RICE STREET - ATLANTA, GA.

PENETRANTS • SIZING • SHUTTLE DRESSING • SOFTENERS • ALKALIS  
• TWIST SETTER MACHINES •



#### WHAT OTHERS ARE SAYING

outerwear which holds its shape, is crease-resistant and has good wearing properties. The same type of fabric, however, worn next to the skin might not be so desirable due to its lack of moisture absorption. It is, therefore, necessary to select the correct blend of fibers which will insure the desirable properties and minimize the undesirable.

The proper blending of all of these new materials together with the natural one at hand is not a thing that can be accomplished overnight and undoubtedly will require considerable time to obtain the best results. It took a number of years to place rayon in its proper place, and the oldest synthetic we have—nylon—has not yet assumed the place that it will in time.

From the viewpoint of the processor of these new fibers, all is not entirely rosy. It might be supposed that fibers having such desirable properties could just be purchased by a mill and made into fabric without any great trouble or headache. This, however, is not the case.

These new fibers do not react in the same manner in the dyeing process as

do the older fibers. Both the selection of dyestuffs and the process of applying them differ largely from the practices formerly used. The resistance of these fibers to moisture pick-up and retention poses static problems which, while present to some extent in the natural fiber, are magnified greatly in the newer synthetics. This involves the production of anti-static materials and the proper use of them.

The cost of these fibers, in most cases, is higher than that of the natural fibers or of rayon, but as greater production is obtained and durability increased, the cost to the consumer will be more in line with that of the older fabrics. Then the real competition will begin.—Aaron E. Carpenter, chairman of the board, E. F. Houghton & Co.

#### Senator Kennedy's Assult

THE new senator from Massachusetts, John F. Kennedy, is making good on a campaign promise that did a lot to help get him elected.

Senator Kennedy, a Democrat, defeated the Republican Henry Cabot Lodge largely because of his statement that the then incumbent had been feeble if not impotent in his efforts to

revive the New England textile industry. It may be noted in passing that this Democratic victory came in the face of a Republican landslide in Massachusetts. Also that most Southern states and no others voted for the Democratic presidential nominee, states wherein reside the very textile industry that Kennedy would harpoon.

The senator told our Washington correspondent that he would make a series of speeches outlining his proposals for giving the New England textile industry a legislative "shot in the arm." It will be interesting to hear what he comes up with. Undoubtedly his panacea will bring ill to the Southern industry in the same proportion they will bring good to his own.

The first step in discriminatory if not outrageous government meddling in what should be "free enterprise" has already been taken. Defense Mobilizer Dr. Arthur Fleming has issued a directive that 20 to 30 per cent of all defense textile orders shall be awarded to industry in "distress" areas. And that of course means New England principally. The definition of a distress area, which Representative Paul Brown of Georgia says was produced by Solomon Barkin of the C.I.O., is one where

**FAMOUS RINGS**

**ROMANS CARRIED KEYS RIGHT AT HAND!!**

No searching for keys when the Romans came home . . . the key was on the ring, and the ring was on the finger.

**Ragan Rings**

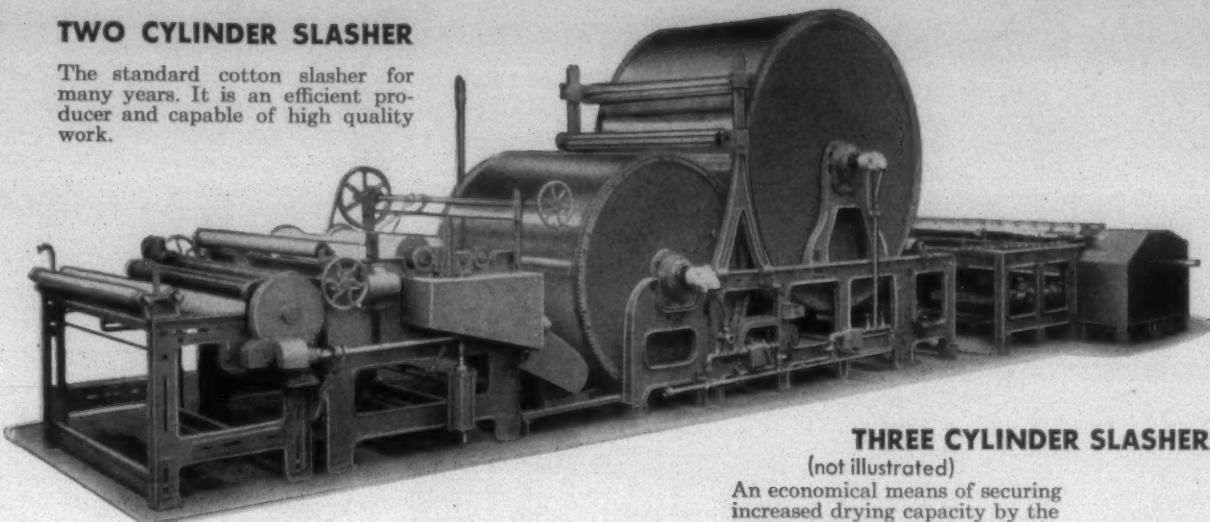
**RAGAN RING COMPANY**

REPRESENTATIVES: John Foard, P. O. Box 574, Newton, N. C.  
Arthur Harris, H. B. "Booch" Askew, John Johnson, 443 Stonewall St., S. W., Atlanta, Ga.

The only manufacturers of Textile Rings in the South.  
666 Murphy Avenue, P. O. Box 174 • Station A, Atlanta, Ga.  
William S. Johnstone, P. O. Box 3213, Station A, Greenville, S. C.  
William R. Fox, P. O. Box 380, Providence, R. I.

### TWO CYLINDER SLASHER

The standard cotton slasher for many years. It is an efficient producer and capable of high quality work.



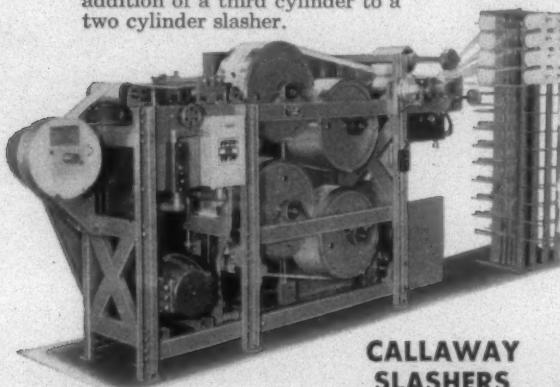
## A Slasher To Fit Every Requirement

There's a WPF&M slasher for virtually every slasher room requirement . . . sample slashing or full production . . . the lightest gauze or the heaviest sheeting . . . natural fibers or synthetics. Whether you require a complete slasher installation, from size preparation to the finished warp, or modernization of your present equipment, call on the West Point Foundry and Machine Company—specialist in slasher room machinery.

### THREE CYLINDER SLASHER

(not illustrated)

An economical means of securing increased drying capacity by the addition of a third cylinder to a two cylinder slasher.

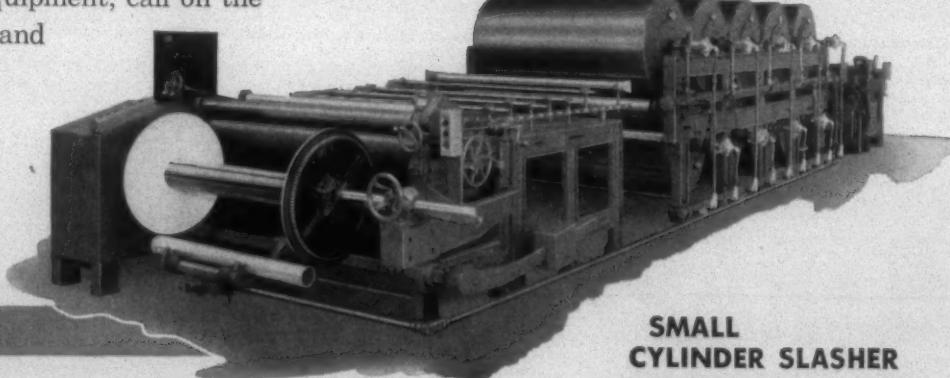


### CALLAWAY SLASHERS

#### Model 50

Small, narrow-width machines capable of making full width warps for samples, testing, etc., using small amounts of yarn.

#### Model 51 (illustrated)



### SMALL CYLINDER SLASHER

(30" DIA.)

A versatile machine suitable for cut staple and filament yarns. Can also be used for cotton.



**WEST POINT  
FOUNDRY & MACHINE  
COMPANY  
WEST POINT, GEORGIA**

### WRITE for SPECIFICATIONS

We will be glad to send you additional information on the 3 slasher units featured above and detail on the WPF&M Air-Dri, Cyl-Air, and Hi-Speed Slashers, without obligation.

#### WHAT OTHERS ARE SAYING

mills are not operating more than 80 hours per week.

All of South Carolina's 122 textile plants are working more than 80 hours per week, whereas 22 mills in the New England region are not, and thus are eligible for negotiated contracts. There are 48 plants in New England that operate more than the required minimum and must obtain or lose business on competitive bidding. Perhaps one of the projects of Senator Kennedy will be what to do about these mills that

cannot cry havoc so far as the directive applies to them.

For even those New England mills that keep busy often lose money and Senator Kennedy knows that can't continue. So the enterprise is not only to provide employment for the New England textile plants but to provide prosperity for their owners as well.

The transition, not the migration, of textile supremacy from North to South has been going on a long time. In three decades the South has risen from a 20 per cent factor to an 80 per cent, while New England has moved in re-

verse ratio. Modern new plants and machinery in the South have come speedily to replace the obsolete industry of New England. At the same time the new generation of textile families in that region have moved into other industries while we have made textile employment more and more attractive to our young people. Add to that the restrictive union conditions in the New England industry and heavy tax loads and you have a fairly well-rounded explanation of what has happened.

To overcome this perfectly logical trend perhaps the Massachusetts senator would like the Federal Government to (1) prohibit the building or expansion of any textile plants in the South; (2) require all textile employees to join a union; (3) set aside the Sherman Act and require all mills to sell their goods at the same price; (4) limit the work load in all plants and (5) require an equalization of local taxes North and South.

All of this would be contrary to the Constitution and myriads of laws. Senator Kennedy may not be so desperate as to suggest any or all such measures but to stop an economic cycle by legislative fiat would require some such nonsense.—Greenville (S. C.) News.

**SAVED...**  
**25% COST!**  
**65% TIME!**

Binding piles of felt pads in corrugated boxes with Stanley Steel Strapping instead of sewing them up in burlap bundles, BYFIELD FELTING CO. has cut packing costs one-fourth... reduced packing time by 65%. Pads are now protected from dampness by the carton and by the compression of the taut steel bands.

Whether you use cases, cartons, or bales, explore the savings that can be made in packing and handling with the Stanley Steel Strapping System. Call in the Stanley Pack-

ing and Shipping Engineer. He'll install the Stanley Steel Strapping System on a 30-day trial. There is absolutely no obligation. Just mail the coupon below.

**STANLEY STEEL STRAPPING SYSTEM\***

Reg. U. S. Pat. Off.

\* A MAN thoroughly experienced in steel strapping applications — the Stanley Packing and Shipping Engineer.

A METHOD adaptable to any requirement—the Stanley Steel Strapping System with representatives in 32 principal cities.

THE STANLEY WORKS, Steel Strapping Division  
213 Lake St., New Britain, Conn.

HARDWARE  
TOOLS  
ELECTRIC TOOLS  
STEEL STRAPPING  
STEEL

- Yes—the 30-day free trial interests me. Have the Stanley Packing and Shipping Engineer call.  
 Send me complete information about the Stanley Steel Strapping System.

(Please write name and address in margin of page)

#### Functions Of Technical Service

TECHNICAL service may be thought of as a bridge between research and sales. Research concerns itself with obtaining fundamental information about a company's products. The sales function, on the other hand, is engaged in the distribution of these products. Technical service is the vital link which enables the customer to obtain sufficient technical information to decide how the supplier's products may best benefit him.

Not so long ago, technical service as known today was virtually non-existent. Research results were jealously kept within the confines of the company. Lacking adequate scientific data, consumers of dyes were often perplexed as to the product to choose which would best suit their needs. Advertising was hampered by lack of technical facts to publicize, and therefore frequently resorted to distortion of ideas in both text and art in an effort to increase sales.

More recently, however, industry has come to realize that such isolationism defeats its own purpose. Modern industrial life is so interwoven that a

free-flow of information between supplier and customer is essential to the well being of both. Accordingly, much more research time is being spent on customer problems. Advertising is becoming more factual and less spectacular. Sales representatives are better trained to present and discuss scientific data. And a new function, technical service, was created to enable research results to be applied to the customer's needs with the greatest possible efficiency.

The supplier's technical representative is equally concerned with old and new products made by his company. He ensures the proper use of old products, and endeavors to find new applications for them. He investigates new products with a view to adapting them to the particular needs of the customer. In turn, he receives suggestions from the customer as to possible types of new products, and how old ones can be improved in order that they will perform better in the customer's plant.

The large-scale manufacturer, because of great diversity of contacts, is in a particular position to have an intimate knowledge of the field. Such an organization's technical service group therefore has an added responsibility—that of keeping the customer informed as to the latest advances in the art. The large dye manufacturer, for example, gives the dyer advice as to the use of modern dyeing equipment and helps to get it into operation. Technical bulletins are written and distributed. Needs of the industry are written into dye specifications, so that the mills may operate as trouble-free as possible. This close association between supplier and customer has already proved its merit in the dye industry, and will grow constantly stronger in the years ahead. —*Dyelines and Bylines*, American Cyanamid Co., Calco Chemical Division.

## What Is Research?

RESEARCH is a high-hat word that scares a lot of people. It needn't. It is rather simple. Essentially, it is nothing but a state of mind—a friendly, welcoming attitude toward change. Going out to look for a change instead of waiting for it to come. Research, for practical men, is an effort to do things better and not to be caught asleep at the switch. The research state of mind can apply to anything: personal affairs or any kind of business, big or little. It is the problem solving mind as con-

# After the warp is sized and dried

use **O-W**  
**LUBEKOTE**  
*on top of the sizing!*

Yes—after the warp is sized and dried—cover it with O-W Lubekote to improve weaving qualities.

O-W Lubekote is a self-drying, plastic, wax-like substance which forms a uniform, smooth, lubricous coating on top of the size.

Does not affect the flexibility of the yarn.

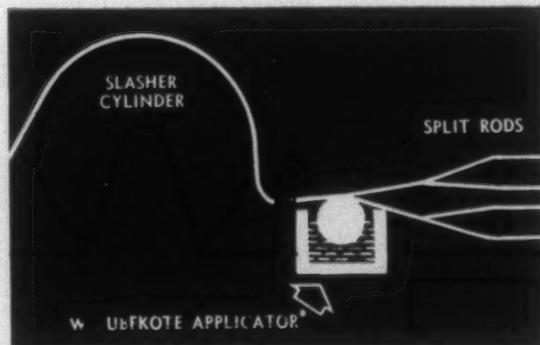
Actual mill production tests prove that yarn coated with O-W Lubekote weaves better because it has far greater resistance to abrasion by the harness, reed and shuttle.

There's less hanging and breaking, less fly and shedding because O-W Lubekote completely covers the dry, flaky sizing film and makes the yarn smooth. Put O-W Lubekote on top of the sizing with applicator installed right on the slasher.

### LOOK AT THIS DIAGRAM □

See the applicator in position between the drying cylinder and the split rods. O-W Lubekote is applied to the warp *after the warp is sized and dried*.

\*Patent Pending



Use it over any sizing on cotton and synthetic spuns, synthetic filament yarns—without sizing on the higher twist filament yarns.

### Write today

for the question and answer booklet

"Cut Idle Loom Time With O-W Lubekote"  
to . . .



# CHEMICAL PROCESSING COMPANY



Makers of Chemwax, Lubewax PVS, Gel-ex and O-W Lubekote  
P. O. BOX 5186 CHARLOTTE 5, NORTH CAROLINA

# Stehedco

and

# Southern

WORLD FAMOUS TRADE NAMES OF THE  
**STEEL HEDDLE MFG. CO.**  
and **SOUTHERN SHUTTLES DIVISION**



2100 W. Allegheny Ave. • Philadelphia 32, Pa.



Paris, Greenville, S. C.

*Manufacturers of*

Flat Steel Heddles •  
Loom Harness Frames • Loom  
Reeds (Pitch Band and All Metal, Regular and  
Stainless Steel Wire) • Loom Harness Accessories  
• Automatic and Hand Threaded Southern  
Shuttles (Tempered Dogwood, Persimmon,  
and Fibre Covered) • Warp Preparation  
Equipment • Electrode Rods (Fibre and Plastic  
Insulation) • Drop Wires • Creel Stop  
Motions • Pigtail Thread Guides • Tension  
Washers • Light Metal Stampings • Hard  
Chrome Plating • Hard Chrome Plated Parts  
• Rayon Cake Holder



268 McDonough Blvd. • Atlanta 1, Ga.

**STEEL HEDDLE COMPANY OF CANADA, Ltd.**



310 St. Hubert Street • Granby, Quebec, Canada

**STEHEDCO and SOUTHERN Products**

"Weave the World's Needs"

## WHAT OTHERS ARE SAYING

trasted with the let-well-enough-alone mind. It is the composer mind instead of the fiddler mind. It is the "tomorrow" mind instead of the "yesterday" mind.—Charles Kettering.

## Freedom For Some

IN the strike of electrical workers against the Southern California Edison Co., the firm's president, W. C. Mullendore, vigorously exercised his constitutional right of freedom of speech by presenting the company's side of the controversy. . . . For exercising the right of free speech, however, charges of unfair labor practices have been filed with the National Labor Relations Board against the Edison company by the electrical workers' union. . . . Labor, no less than management, should recognize that for this nation to remain free, constitutional rights cannot be denied groups or individuals.—*Perris (Calif.) Progress*.

## Can't Halt Our Progress

THE cold war between the South and New England is warming up again. There are rumors in Washington that young Senator Kennedy of Massachusetts and others will attempt punitive legislation against the South in order to check the exodus of industry from the Northeast.

In recent years the South has been leading the nation in almost every economic category. Industrial plants are moving in to take advantage of a more favorable climate, more ambitious and efficient workers, and to be nearer rich markets. Chief among them have been textile firms in flight from New England.

It has become an apparently unquestioned truism in the Northeast that the only reason for this is lower Southern wages. So the New Englanders are reported to be advocating a national minimum wage to narrow differentials between the sections, and an amendment to the Taft-Hartley Act that would encourage labor organizers in the South.

Visit New England, or talk to a New England manufacturer, and the real reasons for the state of affairs there become apparent. Taxes made survival, much less a fair profit, almost

impossible. Relations between management and labor are such that each suffers. Plants and machinery have grown obsolete and uneconomic.

New England can revive its economy by facing a few unpleasant facts at home. But instead of putting their own house to rights, New England politicians find it expedient to use the South as a whipping boy. Their attempt will fail, because its basic premise is wrong. New England cannot solve its complex woes by pulling another section down.

We agree with Governor Talmadge, who said: "The South is on the march and will keep on the march, and any such punitive legislation will backfire." —*The Atlanta (Ga.) Journal*.

## Executives Contribute

PRESIDENT CRAWFORD A. GREENEWALT of the Du Pont Co., in a recent speech at Chicago, pointed up in excellent fashion the great contribution to the social, cultural and spiritual life of America made by business executives. He contended that these men should be recognized as members of a profession which, while comparatively new, is as significant as those which are older and have held honored positions in society for hundreds of years. Unless the prestige of an executive career is thus enhanced, he argued, many young men whom American business needs may turn to other endeavors. Under the present tax laws and those indicated for some time to come, the "money incentives so characteristic of business are declining in attractiveness."

"The business executive's part in our national development," said Mr. Greenewalt, "has been as profound—and far more lasting—than the exploits of the warriors and the makers of the laws . . . The America we know today—its high living standards, its strength, its position as a world power—would have literally been impossible to achieve without the executive function. Our living standard and our strength arise out of our ability to produce. And production today in the required quantity, quality and price depends on having enough competent talent to tie the diverse ends together and weld them into an effective machine."

"American industrial development has come about largely through the

# Compare This Pair...

of Superior SOUTHERN SHUTTLES  
with Others On Your Rayon Looms



For Draper Looms

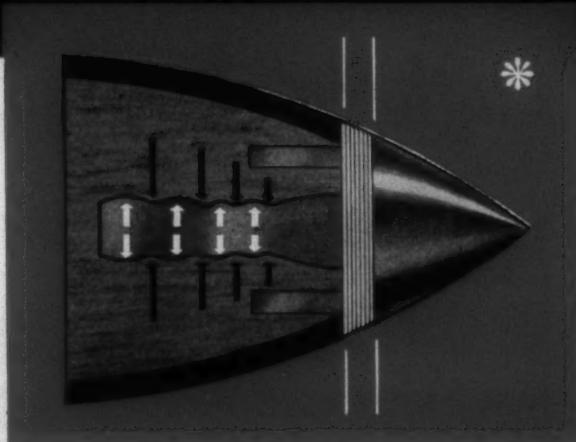
Besides possessing the faultless "Magnum Tip" design they possess such leading features as first pick tension eyes for every fabric. Improved heavy duty tension pads with patented features. These pads last longer than any other on the market. "Permaligne" Spring Assembly provides the best in bobbin alignment and minimum wear of grooves.



For C & K Looms

## The Magnitude OF THE MAGNUM TIP...

means "the Southern Tip gives a permanent grip". From tip insertion with pressure control plus the inclusion of multiple laminated washers and reverse taper of grooved "magnum shank", holding power has been increased immeasurably.\* In addition to this there is the assurance of full compression between "magnum tip" and wood. Pressure control provides perfect alignment, a fact that is so necessary in securing stability required to prevent the usual movement that causes loosening of the tip. Be assured and rest assured with Southern.



### MULTIPLE LAMINATED WASHERS

expand and contract with conditions encountered, and at all times present a smooth surface between tip and shuttle body . . . ideal for consistent quality production.

\* \* \*



## SOUTHERN SHUTTLES

A DIVISION OF STEEL HEDDLE MFG. CO.

PARIS, GREENVILLE, S. C.

It's Southern for Service and Delivery

#### WHAT OTHERS ARE SAYING

process of innovation, and it is here that the executive has made his most significant contribution. Philosophers of an earlier day would be astonished to see that it has been the businessman, not the social reformer, who has destroyed the status quo . . . The horizon still extends far beyond the range of our present vision."

The Du Pont chief continued: "If this bright prospect is to become a reality, it will be due largely to people who are sufficiently acute and perceptive to venture into these unknown fields, and who can organize the technical and financial resources required for success. For it is in this way that our economy has continually refreshed its vitality. The initiative has come from our businessmen.

"This is not to deny that scientific discovery is the raw material of our advance. Yet science alone, invention alone, may be of only academic interest or significance—unless through business development it descends from the clouds to join the service of men."

According to Mr. Greenewalt, half

our present national working force is engaged in production and sales of things unheard of generally in 1902.

He could also have mentioned, in his excellent talk, the fact that just as products have changed, executives also are not what they used to be. They have developed a social consciousness which was not always found in businessmen half a century ago, though there were exceptions of course. Just as he thinks that the opportunity for monetary rewards alone is not enough to attract potential young executives into business, so too men already so engaged have learned that there is more to their role in life than the mere building up of personal fortunes.

—*The Greenville (S. C.) News.*

New England textile mill operators say "it is impossible to operate against the competition of Southern mills. . . ."

Well, that's an easy problem to solve — move South. — *Arkansas Gazette*, Little Rock, Ark.

A big shot is only a little shot who failed to give up.—*Greenwood (Miss.) Commonwealth.*



"Well, now that the holidays are over maybe we can find a couple of guys who aren't designing personal Christmas cards."

It never occurs to a boy of 18 that some day he will be as dumb as his father.—*Etowah (Tenn.) Enterprise.*

Before marriage they quote Shakespears; afterwards, Junior, — *Ellaville (Ga.) Sun.*

## M&W Cloth Finishers' Bulletin...

Here's news! Besides our Positive Overfeed with Selvage Guider, our High Speed Tenter Frame, and the most complete line of tenter clips, we supply —

### ANTI-FRICTION

Constant tension or tensionless.

### SEMI-PERMANENT

Movable, with casters, or fixed base, swiveling for easy cloth alignment.

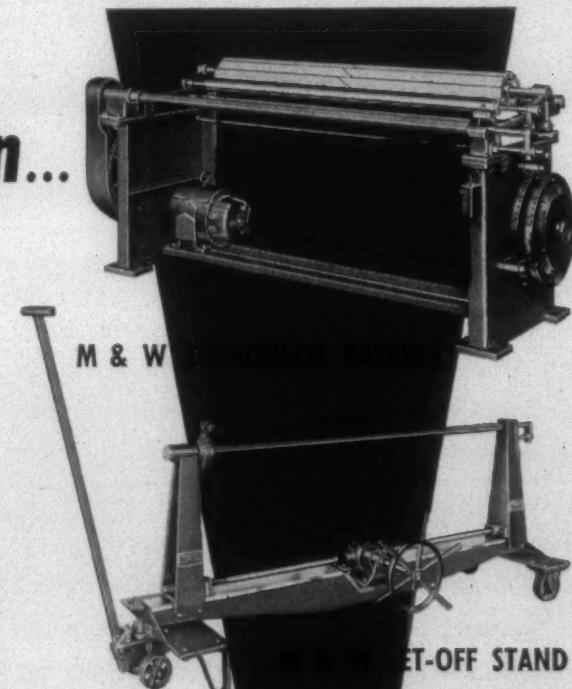
### STAINLESS STEEL

Anti-friction bearings throughout. Designed for easy installation in any location in your plant.

### TEMPERED GLASS

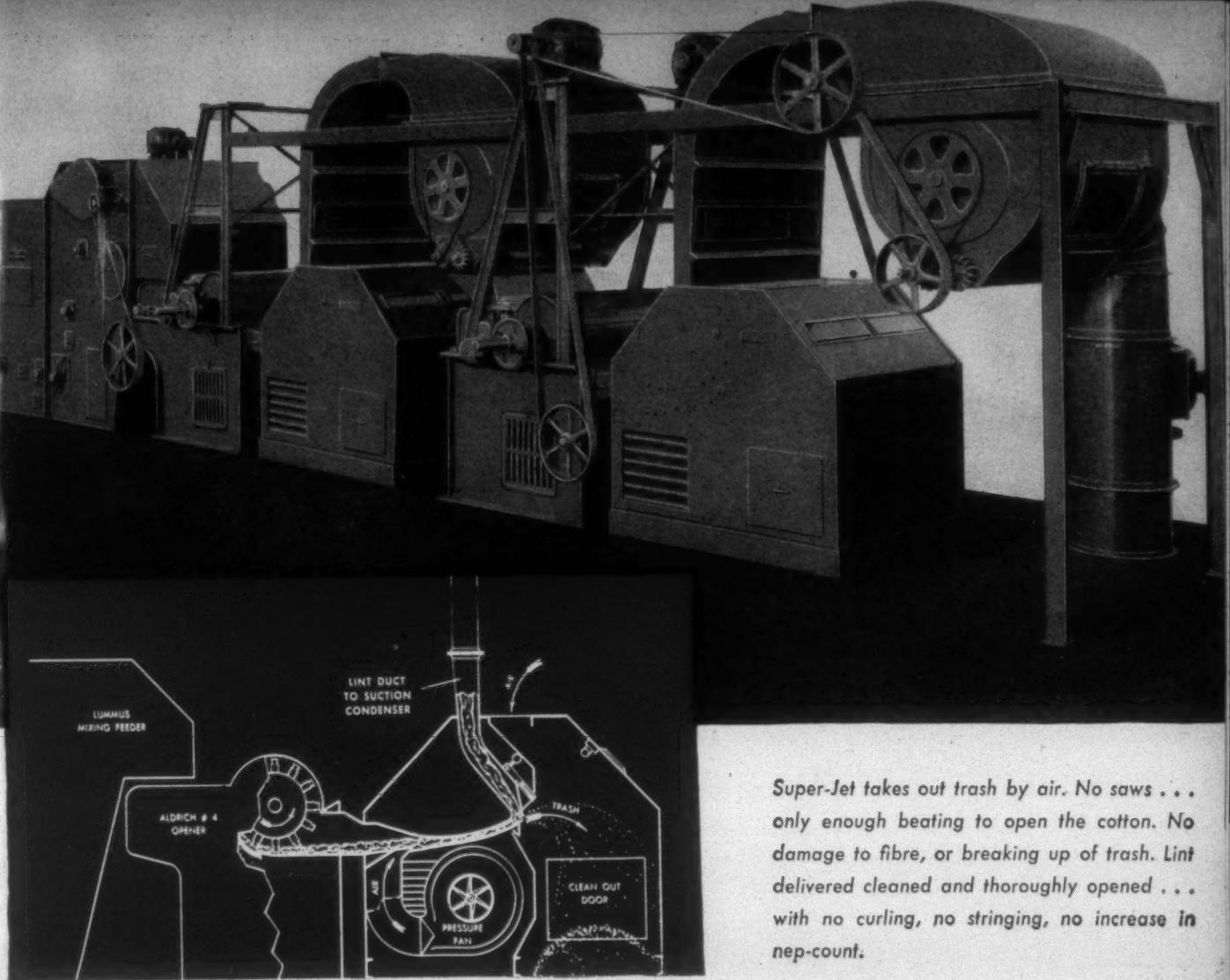
Short tenters (30", 80" and 100" long, using our No. 12 tenter clip), built to any maximum width, with either straight or hinged rails. Serve many useful purposes. Made only by M & W.

**SEND FOR DATA TODAY** These specialized M & W devices answer many long-standing demands that no other machinery can satisfy. Have us explain how many plants are profiting by their exceptional utility. Write for details without obligation.



**MARSHALL and WILLIAMS CORPORATION**  
**PROVIDENCE, R. I. • Greenville, S. C. • New York, N. Y.**

Export Agent: Francis H. Love & Son, 57 William Street, New York 5, N. Y.



Super-Jet takes out trash by air. No saws . . . only enough beating to open the cotton. No damage to fibre, or breaking up of trash. Lint delivered cleaned and thoroughly opened . . . with no curling, no stringing, no increase in nep-count.

## WITHOUT LOSS OF SPINNABLE FIBRE TANDEM SUPER-JET MAKES COTTON CLEAN

Tandem Super-Jet cleaning system as shown here, not only does not take out good lint, but can be set to remove any desired type of trash. Super-Jet is now in operation in a long list of mills, whose cotton ranges from waste mix and good ordinary up to strict middling. In these mills Super-Jet has proven itself as the first really new idea in lint cleaning in the last 75 years.

Super-Jet cannot damage fibre because it has no moving parts, and does its work with two air-currents. It eliminates the heavy cost in high-priced cotton of fibres damaged by cleaning, and good, spinnable lint thrown out with the motes.

Super-Jet takes out motes and neps; bark, shale, stems, grass and other loose trash without breaking them up into motey material or pepper trash. Used in Tandem with the opening equipment shown, the cleaning system turns out cotton ready for delivery direct to the pickers and so dust-free that you will notice that your card and spinning rooms are cleaner after installation of Tandem Super-Jet.

We have been given permission to invite you to visit mills with Super-Jet installations, running the same type of cotton you use...and will be glad to arrange such visits at your convenience.

## ALDRICH-LUMMUS CLEANING SYSTEM

LUMMUS COTTON GIN CO.

Columbus, Ga.

and

ALDRICH MACHINE WORKS  
Columbus, Ga.

Made by

Sold and  
Installed by

Aldrich Machine

Works, Columbus, Ga.

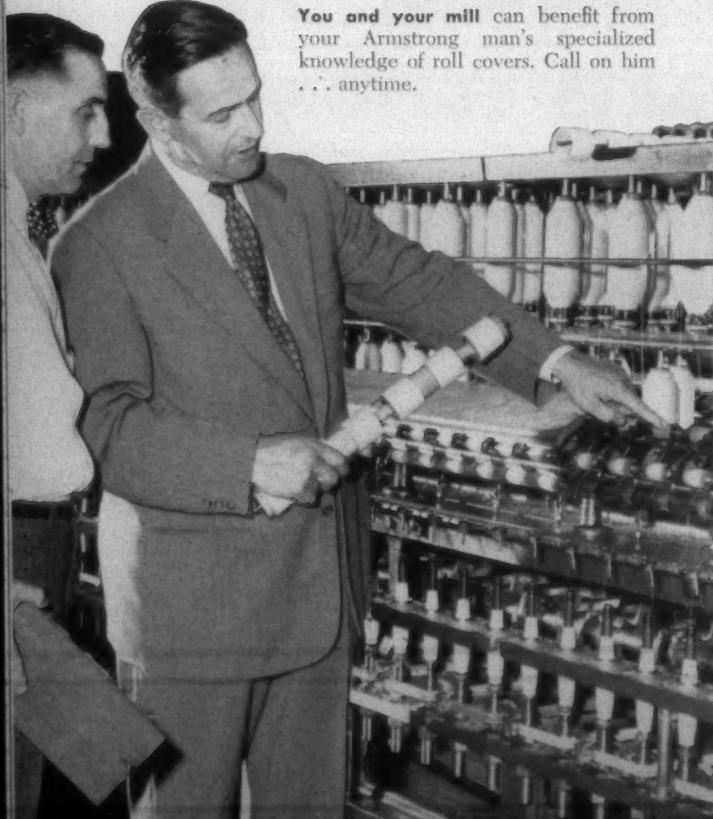
# When you plan to start spinning

## BLEND S



### Call your Armstrong man—he can help

You and your mill can benefit from your Armstrong man's specialized knowledge of roll covers. Call on him . . . anytime.



Blends of natural and synthetic fibers can be tricky to spin. Sometimes even a small variation in percentage composition is enough to cause a big change in spinning characteristics.

If you're going to spin a new, unfamiliar blend, a call to your Armstrong man *before* you make the change may save you much time and money. As your consultant on spinning and roll covering, he can help make sure you have the right cots for the new blend.

Often you'll find he's had experience with a blend similar to yours. If not, he'll gladly work with you to determine which type of cover you should use.

Your Armstrong representative can help you with almost any problem involving roll covers. His years of specialized training and experience provide answers that can be depended on. And no matter what kind

## ARMSTRONG'S



## you get the right roll cover for any blend

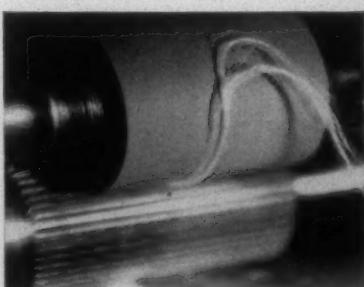
of spinning you do, your Armstrong man has a roll cover that will give you clean, even yarn at low cost.

In addition to cork, he has a complete line of lap-resistant Accotex® Cots. Lap resistance is built right into Accotex Cots by adding a patented electrolyte which neutralizes the electrical attraction between cot and fiber. Accotex Covers are long wearing, too—with a minimum of re-buffing, they'll give up to six years' continuous service. Every formulation is made in a wide range of firmness to provide proper cushion for different kinds of work.

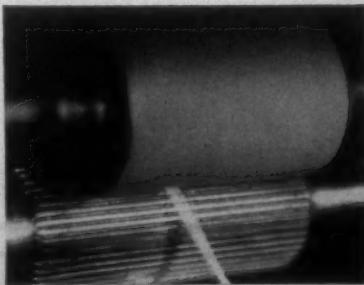
For samples of any Armstrong textile product, get in touch with your Armstrong man or write direct to Armstrong Cork Company, Textile Products Department, 6506 Davis Avenue, Lancaster, Penna. Accotex Cots are available for export.

### WHEN THE YARN BREAKS . . .

**This Cot Laps.** Moisture layers on fiber and cot contain mutually attracting electrical charges. On most cots, this is chief cause of lapping.



**This Cot Resists Lapping.** Certain electrolytes put in Accotex Covers neutralize electric charges in moisture layer on cot. This eliminates the inherent attraction between the cot and fiber.



# ACCOTEX COTS

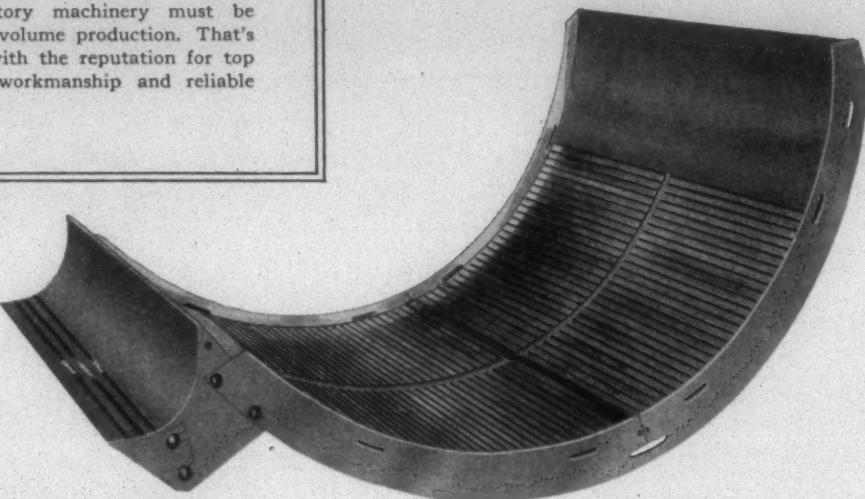


# MORE PRODUCTION AT LOWER COSTS

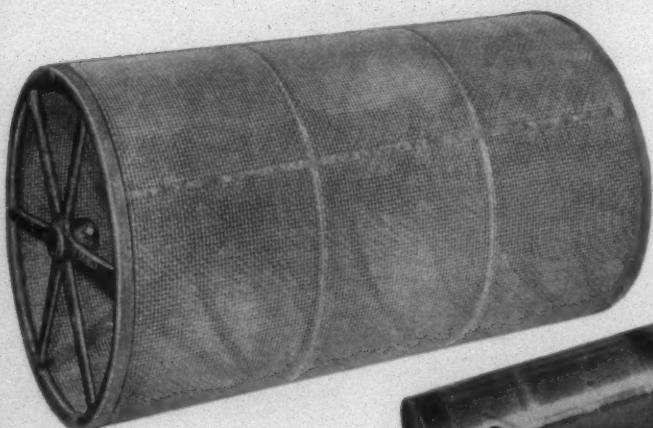
with **GASTONIA TEXTILE**  
**SHEET METAL PARTS**

The quality and the profit of your end product starts at the beginning—where preparatory machinery must be geared for efficient, economical volume production. That's our job—a job for specialists with the reputation for top quality products, painstaking workmanship and reliable service.

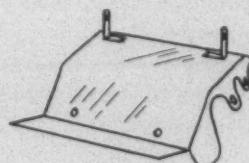
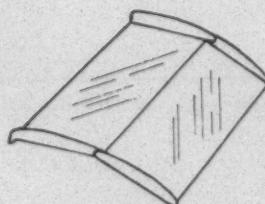
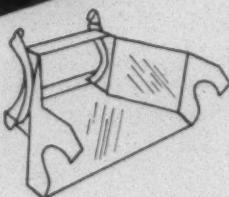
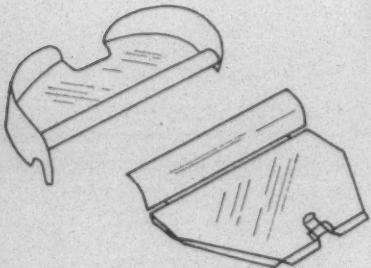
Standard type rib or perforated Card Screens are precision built on special jigs. Every screen is inspected and double checked for accuracy and tolerance.



Picker, Condenser and Waste Machine Screens of maximum strength and durability are constructed of the best materials available.



New and rebuilt Cylinders are dynamically balanced to reduce vibration to an absolute minimum.



*Years of practical experience—the finest of raw materials—and precision machinery in the hands of skilled workmen go into every product.*

**GASTONIA TEXTILE SHEET METAL WORKS, Inc.**  
**GASTONIA, NORTH CAROLINA**  
**A SHEET METAL WORKS SERVING TEXTILE MILLS**

**for PRODUCTION . . .**

Speeds over 500 courses per minute on standard patterns and constructions.

**for CONTROL . . .**

Improved new yarn let-off and cloth take-up motions provide accurate control of cloth quality.

**for FLEXIBILITY . . .**

A far wider range of cloth patterns and qualities can now be produced.

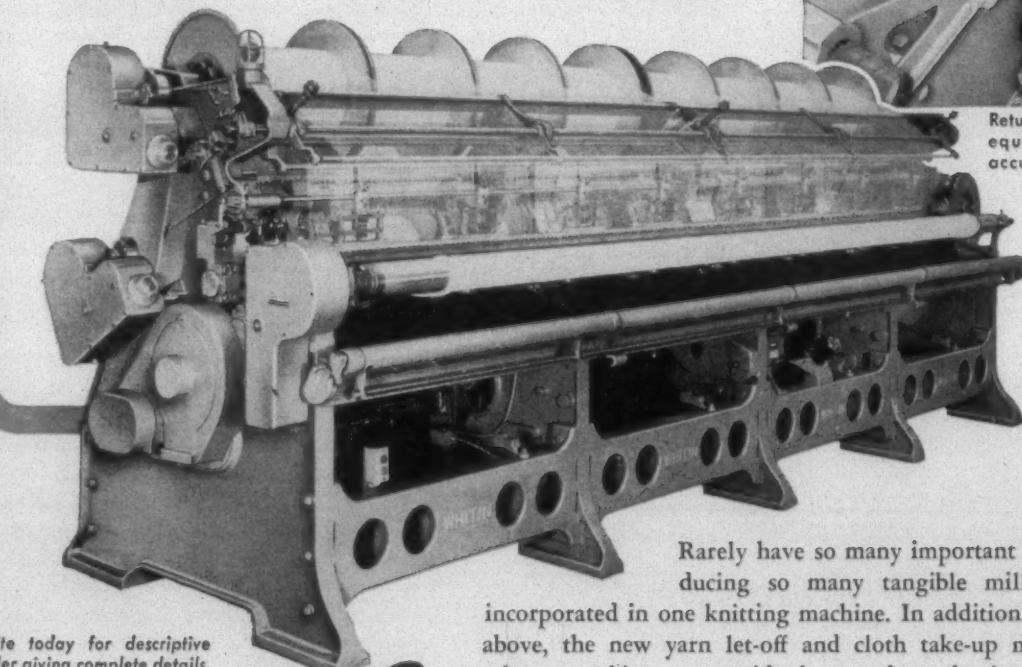
**for SIMPLICITY . . .**

All parts are more accessible for services and all adjustments can be made simply and quickly.

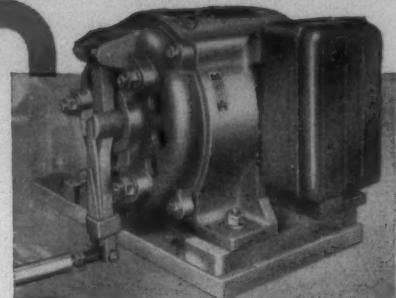
... for all 'round

# Top Performance

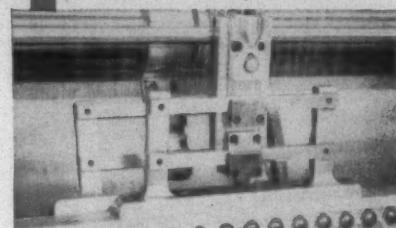
... it's the new WHITIN  
**MODEL "D" TRICOT KNITTER**



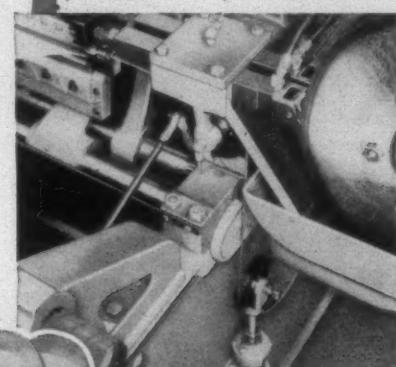
Write today for descriptive folder giving complete details.



New Whitin Diehl Power Transmitter  
for instantaneous stop and start.



Redesigned Guide Bar suspensions for  
positive lock down position of front bar.



Return mechanism with  
equalizing spring for  
accurate control of  
Guide Bar motion.

Rarely have so many important improvements, producing so many tangible mill advantages, been incorporated in one knitting machine. In addition to those illustrated above, the new yarn let-off and cloth take-up motions, plus many others, combine to provide increased production — improved cloth quality — and low operating and maintenance costs.

**Whitin MACHINE WORKS**

WHITINSVILLE, MASSACHUSETTS  
CHARLOTTE, N.C. • ATLANTA, GA. • SPARTANBURG, S.C. • DEXTER, ME.

# textile bulletin

PUBLISHED MONTHLY BY

## CLARK PUBLISHING COMPANY

P. O. Box 1225 • CHARLOTTE 1, N. C. • Telephone 3-3173  
— Offices and Plant: 218 West Morehead Street, Charlotte 6 —

DAVID CLARK	President
JUNIUS M. SMITH	Vice-President and Business Manager
JAMES MCADEN JR.	Editor
DAVID MCK. CLARK	Associate Editor
ERVIN DICKSON	Associate Editor
ANDREW HEWITT	Assistant Editor
F. R. CAREY (P. O. Box 133, Providence, R. I.—Telephone Williams 3957)	Vice-President and Eastern Manager
R. J. SHINN	Field Advertising Representative
BEN C. THOMAS	Field Circulation Representative

One year payable in advance	\$1.50
Three years payable in advance	3.00
Canada (one year)	3.00
Other countries in Postal Union (one year)	5.00
Single copies	.15

TEXTILE BULLETIN is devoted to the dissemination of information and the exchange of opinion relative to the spinning and weaving branches of the textile industry, as well as the dyeing and finishing of yarns and woven fabrics. Appropriate material, technical and otherwise, is solicited and paid for at regular rates. Opinions expressed by contributors are their own and not necessarily those of the editors and publishers. A companion monthly journal, THE KNITTER, is devoted to the interests of the knitgoods industry.

Vol. 79

June 1953

No. 6

## Southern Progress—A Positive Thing

Regions which claim to have a so-called "mature economy," such as New England, might take a lesson from the South's "economic statesmanship" and "simple good citizenship" which combine to make it the fastest-developing part of the country, according to Burnet Maybank, Democrat Senator from South Carolina and ranking member of his party on the Senate Banking and Currency Committee. In a long speech to his colleagues on the Senate floor the afternoon of June 10, Senator Maybank did not mention New England by name, but the inference was obvious.

He did not mention directly the repeated attacks of New England politicians on the textile South and their continued efforts to force punitive legislation on the region to curb its efficiency and greater productivity, but he effectively told them the South's amazing story. And the reasons behind this vast resurgence of the South, he said, should give hope and inspiration for parallel events elsewhere in the nation under a new era in which all the forces of a dynamic free enterprise system can be brought into play to produce a "greater flow of human dividends."

Acceptance of advancing technology, business foresight and willingness to provide "fair measure for fair value

received," he continued, along with a rejection of "petty tyranny," are permitting the Southeast to pass an equitable measure of productivity benefits along to the consumer in the form of lower and competitive prices. After all, he said, what most Americans are striving for is the greater goal of a constantly higher scale of living, more and better products and the money with which to buy a fair share of them.

"If all industry, labor and agriculture can move head together toward this greater goal, the well-being and security of the entire national community will ever be uplifted, and America need never fear for the future," he added. "Southern industry is doing research on a tremendous scale and is applying the scientific approach to its work and to its markets. It can do this because now the South, for the first time in its long and glorious and at times painful history, has capital of its own. And the South knows how to use that capital."

Neither stockholders nor the great majority of production workers in Southern mills have opposed technological advances which make for more and better products at lower cost, for they understand that to ignore or oppose those improvements is to oppose their own best interest, he said. "There is," he continued, "obviously wide recognition of the fact that the distribution of these benefits (of increased productivity) must be fair and equitable, in accordance with best managerial judgment as dictated by given economic and business conditions. As a result, distribution of the benefits of increased productivity is among employees in the form of reasonable wages and good working conditions, among stockholders in the form of reasonable earnings on their investments, and among consumers in the form of goods which the public wants at a price the public can pay."

Senator Maybank said, however, that "economic statesmanship" encompasses more than an equitable sharing of productivity benefits. Also, he stressed, it involves "the husbanding of resources, prudent policies of public spending at the local and state levels of government, and the reinvestment of industry earnings in plants and machinery, with a constant awareness of the truth that if managerial judgment should be faulty or should be forced to give way to outside pressures, the resulting mal-distribution of productivity benefits would most certainly paralyze progress."

For these reasons, he said Southern states have not plunged into "lavish projects based on deficit financing" and the populace of the South "refrains from burdening Southern industry unduly by financial demands which would increase the cost of doing business in the region." Thus, he pointed out, industry finds greater incentive to plough back earnings into bigger and better productive facilities "and in this manner industries and the whole economy are continually undergoing a process of self-rejuvenation, keeping young and vigorous."

Senator Maybank asserted that regions or countries which profess to have reached so-called "economic maturity" frequently have perplexing problems which suggest that "their 'maturity' is in reality a condition of approaching old-age or weariness or of becoming worn out."

"Can it be," he asked, "that such regions are paying the penalty of failure or inability to translate their scientific progress into lower prices for the buyers of their products? Is it perhaps possible that in their zeal to promote expensive social welfare schemes, they have stifled industrial ini-

NEED HELP WITH

# Processing Problems?

CALL FOR THE HOUGHTON MAN...

He is constantly meeting up with a wide variety of problems as he's called into textile mills. You will not only get the benefit of his own experience in getting to the core of the problem, but back of him is the Houghton organization with years of research and development work in the textile processing field.



NEED PRODUCTION-IMPROVING

# Processing Products?

Ask the Houghton Man about these when he calls . . .

**FOR COTTONS** . . . Depend on Houghto-Size sizing compounds . . . concentrated . . . providing high weave-room efficiency. For slicker warps with excellent fiber lay use also Houghto-Wax in the size kettle.

**FOR WOOLENS** . . . Sulfol 448, non-ionic stock lubricant for woolens and worsteds, which minimizes static, is odorless, non-staining, non-corrosive. Also Lanolubric wool oils, well known for over half a century for their dependable performance.

**FOR SYNTHETICS** . . . Raylubric oils for softening, soaking and throwing rayon and synthetic fibers.



Ask your Houghton Man about the full line of Houghton surface active agents or write E. F. Houghton & Co., Philadelphia 33, Pa.

**E F HOUGHTON & CO.**  
PHILADELPHIA - CHICAGO - DETROIT - SAN FRANCISCO



Ready to give you  
on-the-job service . . .

## EDITORIALS

tiative by running up the costs of doing business? Have they, either blindly in their altruism, or in surrendering to various kinds of pressures, lost the sense of economic balance? Have they saddled themselves with burdens too heavy for their industries to bear, in the face of the competitive situation both domestically and abroad?"

Declaring that the new South offers America a "living example" of the dynamic driving force of free enterprise which has made it great, the Southerner admonished: "Let us keep uppermost in mind the fact that America's progress has always been directly related to the continued expansion of her business and industry. From the day the Constitution came into being, this nation has never stood still for long. America's basic economic power stems from its determination and its ability to grow, to expand from the base, to develop something new, to find better and more efficient ways of doing things, to provide more and better things for more people."

In an obvious reference to New England, he asserted that "no good can come by one region trying to impose upon other regions that are more adaptable for certain industries the very faults and ailments which caused its own hardships."

He said the Southern industrial revolution is a continuing, dynamic upsurge because its leadership seems convinced that "apparently there are no visible limits to the variety or volume of human consumption" and "the capacity of man to enjoy the fruits of his labor recognizes no boundaries."

"New processes, new techniques, new designs for plants, the ingenious use of raw materials and supplies of power

and water—these are the demands of modern industry and these demands are being met promptly and adequately in the South."

Senator Maybank cited that since 1919, earliest year for which Census Bureau figures are available, the four largest textile states on a basis of their cotton system spindles—the Carolinas, Georgia and Alabama—have seen textile jobs pyramid from 176,000 to 508,000, a three-fold increase, and total wages and salaries rise from \$136,447,000 annually to \$1,308,000,000 in 1951, a ten-fold increase.

Senator Maybank said friendly civic attitudes as well as "economic statesmanship" and a recognition that industry's responsibility to economic and social progress go beyond matters of individual gain and expediency have made vital contributions to the South's industrial development. "When you travel from one Southern community to another," he said, "you find evidence everywhere of industry's constant striving to create a wealth of greater human values. Some simple manifestations of this are to be seen in the fine new school buildings in many of the textile areas, the community centers, the ultra-modern hospitals, the recreational facilities—advantages to be used and enjoyed by all the people."

The Southerner asserted "the evolution in civic and social consciousness" on the part of industry, as so well exemplified in the South today, had to come about gradually, and could not be forced or legislated, but rather "had to take place in the human heart and soul of business."

"The popular support given various programs of social reform undertaken by government during recent years furnished ample evidence of a generally felt need for industry's acceptance of these greater obligations," he continued. "However, it was largely a case of putting the cart in front of the horse."

Senator Maybank described the "greater-than-ever" re-

## TEXTILE INDUSTRY SCHEDULE

### — 1953 —

June 29-July 3—Annual meeting, AMERICAN SOCIETY FOR TESTING MATERIALS, Chalfonte-Haddon Hall, Atlantic City, N. J.

Aug. 21-22—Outing, SOUTH CENTRAL SECTION, A.A.T.C.C., Chattanooga (Tenn.) Golf and Country Club.

Sept. 10-11—Fall meeting, THE FIBER SOCIETY, Lowell, Mass.

Sept. 12—PIEDMONT SECTION, A.A.T.C.C., Hotel Charlotte, Charlotte, N. C.

Sept. 17-19—National convention, AMERICAN ASSOCIATION OF TEXTILE CHEMISTS AND COLORISTS, Conrad Hilton Hotel, Chicago, Ill.

Sept. 18—Annual meeting, SOUTHERN COMBED YARN SPINNERS ASSOCIATION, Charlotte (N. C.) Hotel.

Sept. 19—NORTHERN NORTH CAROLINA-VIRGINIA DIVISION, S.T.A., Hylton Hall, Danville, Va.

Oct. 1-2—Annual convention, QUARTERMASTER ASSOCIATION, Lord Baltimore Hotel, Baltimore, Md.

Oct. 14-24—INTERNATIONAL EXHIBITION OF TEXTILE MACHINERY AND ACCESSORIES, Belle Vue, Manchester, England.

Oct. 15-16—Annual meeting, NORTH CAROLINA TEXTILE MANUFACTURERS ASSOCIATION, The Carolina, Pinehurst, N. C.

Oct. 19-24—Short course, exposition and competition, SOCIETY OF INDUSTRIAL PACKAGING AND MATERIALS HANDLING ENGINEERS, Mechanics Hall, Boston, Mass.

Oct. 29-30—Annual convention, CARDED YARN ASSOCIATION, Grove Park Inn, Asheville, N. C.

Oct. 29-30—Textile industry conference, AMERICAN INSTITUTE OF ELECTRICAL ENGINEERS, North Carolina State College, Raleigh.

Nov. 5-7—Conference of TEXTILE DIVISION, GEORGIA, TENNESSEE, BIRMINGHAM & HUNTSVILLE SECTIONS, AMERICAN SOCIETY FOR QUALITY CONTROL, Chattanooga, Tenn.

Nov. 12-13—Annual meeting, TEXTILE RESEARCH INSTITUTE, Commodore Hotel, New York City.

Dec. 3-4—SOCIETY OF THE PLASTICS INDUSTRY Sheeting & Coated Fabrics Division conference, Commodore Hotel, New York City.

Dec. 5—SOUTH CENTRAL SECTION, A.A.T.C.C., Hotel Patten, Chattanooga, Tenn.

### — 1954 —

Feb. 4-6—Technical meeting, TEXTILE DIVISION, AMERICAN SOCIETY FOR QUALITY CONTROL, North Carolina State College School of Textiles, Raleigh.

Feb. 17-19—COTTON RESEARCH CLINIC, sponsored by National Cotton Council of America, The Carolina, Pinehurst, N. C.

Feb. 25-27—Annual convention, PHI PSI TEXTILE FRATERNITY, The Carolina, Pinehurst, N. C.

Mar. 18-20—Annual convention, ALABAMA COTTON MANUFACTURERS ASSOCIATION, Hotel Buena Vista, Biloxi, Miss.

April 22-24—Annual convention, AMERICAN COTTON MANUFACTURERS INSTITUTE, Jung Hotel, New Orleans, La.

April 26-May 1—AMERICAN TEXTILE MACHINERY EXHIBITION, Atlantic City (N. J.) Auditorium.

June 10-12—Annual convention, SOUTHERN TEXTILE ASSOCIATION, Ocean Forest Hotel, Myrtle Beach, S. C.

Sept. 15-18—National convention, A.A.T.C.C., Atlanta Biltmore Hotel, Atlanta, Ga.

Oct. 4-9—SOUTHERN TEXTILE EXPOSITION, Textile Hall, Greenville, S. C.

### — 1955 —

Sept. 21-23—National convention, A.A.T.C.C., Chalfonte-Haddon Hall, Atlantic City, N. J.

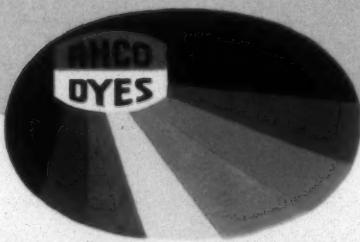
# COLORS *out of this world!*



AHCOVAT SOLUBLE GREEN IB  
AHCOVAT SOLUBLE OLIVE GREEN IBL  
AHCOVAT SOLUBLE PINK IR  
AHCOVAT SOLUBLE BROWN IBR  
AHCOVAT SOLUBLE INDIGO O  
AHCOVAT SOLUBLE BLUE IBC  
AHCOVAT SOLUBLE BRILLIANT VIOLET I4R  
AHCOVAT SOLUBLE GOLDEN YELLOW IGK  
AHCOVAT SOLUBLE GOLDEN YELLOW IRK  
AHCOVAT SOLUBLE YELLOW GCN

All available in powder form

## Quality - Integrity **AHCOVAT\*** **SOLUBLE** **DYES**



**ARNOLD, HOFFMAN**

PROVIDENCE • RHODE ISLAND

Associated with Imperial Chemical Industries Ltd.  
London, England

ARNOLD, HOFFMAN & CO., INCORPORATED • EST. 1815 • PROVIDENCE, R. I.

Offices: Charlotte • Teterboro • Providence

Plants: Charlotte, N. C. • Cincinnati, Ohio • Dighton, Mass.

For vat, acid, direct dyes or auxiliary chemicals for all fibres and fabrics . . . see AHCO first!

\* Reg. Trademark

this modern COMB again puts

# LIVERMORE

\*  
in the LIMELIGHT:

UNBREAKABLE TEETH

As shown: for W-3 loom 26 harness, 4 and 5 ball. Also available: for W-2, C-4 and high speed looms, 20 harness, 4 ball.

HFL  
IMPROVED

## TOOTH-FEATURES never before available in a **ROLLING EVENER COMB**

- Unbreakable.
- Spring Steel.
- Centerless ground to a fine, smooth finish . . . to reduce friction.
- Round.
- All exactly alike — uniform.
- Positions the vibrator lever so that the shoe is in line with chain roll.
- Accurately and evenly spaced in strong, cast aluminum frame.

*CAST TEETH have none of these points!*

\* ...and this plus feature:

self-locating POINTED SCREWS with hex heads  
CUT INSTALLATION TIME IN HALF!

No more fumbling around, in an awkward position, to set your screws. These are self-locating, practically self-starting!

Send for descriptive literature

# HFL

IMPROVED LOOM PARTS

H. F. LIVERMORE CORPORATION

ESTABLISHED 1887

EXECUTIVE OFFICES & PLANT  
BOSTON 34, MASS.

SOUTHERN DIVISION  
GREENVILLE, S. C.

sponsibility of industry to economic and social progress as "that point where the decision to install new machinery or to build an employee health clinic is not made as an expedient for self-aggrandizement under the compulsion of competition alone, but as a duty of simple good citizenship." This attitude, he said, is common in the Southeast.

## Suppose We Did Import All Textiles?

The Administration's plan for a one-year extension of the Trade Agreements Act, including a complete study of international trade problems, has the backing of the cotton textile industry, with one hedge: "We certainly could approve no change which weakens the present safeguards contained in the law, and would advocate the greatest administrative diligence in giving full effect to those safeguards."

This attitude of the industry was explained to Congress recently by Dr. Claudius T. Murchison, economic advisor to the American Cotton Manufacturers Institute, in testimony before the House Ways and Means Committee.

Dr. Murchison, in very accurate fashion, reminded the legislators that American tariffs have been reduced by two-thirds in the years since the reciprocal trade act was first passed, and are not now restrictive when compared with the various types of trade controls which have been imposed by other nations. He listed the various control devices, such as embargoes, import quotas, subsidies, multiple exchange rates, etc., which have sprung into use during the period when American aid was at its crest."

The basic solution to the world trade problem is to eliminate such barriers and to create favorable conditions for the use of capital, according to Dr. Murchison. In the name of the textile industry, he called for the "promotion of positive and constructive measures which are necessary for economic growth."

He warned, however, that further tariff reductions as substitutes for foreign aid are not the remedy. Far more important is the maintenance of prosperity in the United States, on which increasing imports depend. He said that to undermine a basic industry like textiles through removal of protection would be a sure route to unemployment and depression in the United States, and a further worsening of the world trade situation as a whole. And, it might be added, reduce the volume of textile manufacturing in the United States to a point where we might eventually be dependent upon foreign producers for many of our fabric needs; to put it bluntly and unpleasantly, if another war should come, how then would the country be able to fill its needs in a wartime economy?

## Machinery Replacement

Textile machinery manufacturers seem to feel that a policy of dynamic machinery replacement as advocated by the Machine and Allied Products Institute could be a solution to some of the major ills of the textile industry. Speaking before the 20th annual conference of the Machine and Allied Products Institute, Thomas H. West, president of Draper Corp., Hopedale, Mass., stressed that the M.A.P.I. has done "nothing more important than developing its

dynamic machinery replacement policy." The same sentiment was expressed by Hugh Bolton, president of Whitin Machine Works, Whitinsville, Mass., and Robert Leeson, president of Universal Winding Co., Providence, R. I., both of whom spoke at the same meeting.

Though we do not have available to us at this time a copy of what was referred to as the "dynamic replacement policy" of the M.A.P.I., we certainly support the view that a planned and scheduled replacement of textile machinery as it becomes outmoded is a must for efficient and economical mill management. The depressed New England textile industry, where even Sen. John F. Kennedy has admitted, "machinery is old; management is old; methods are old," should be a vivid case in point.

The dynamic replacement policy, or formula, Mr. West explained, "is actually a periodic analysis of equipment replacement which provides the textile mill executive with a timetable for purchase planning. A textile management may decide, based upon the M.A.P.I. plan, that replacement of machinery is desirable a year from now. This gives the firm time in which to contract with the machinery manufacturer for delivery of new equipment at a specified date, a period in which the firm may provide part of the expenditures for new machinery, and it gives the machinery manufacturer an orderly production and delivery schedule on which to adjust his plant capacity."

"Purchase of capital goods today is both an economic and an engineering decision for textile mill management," Mr. Bolton said. "Added income and cost saving are equally important factors in a mill executive's evaluation of new machinery purchases. A highly competitive textile market, and widely diversified production make a sound replacement policy mandatory for profitable mill operation," he emphasized.

Mr. Leeson agreed with the other two speakers, but he cautioned that "other factors such as adequate depreciation allowances on textile machinery must be obtained in order to further encourage mill modernization to the fullest extent."

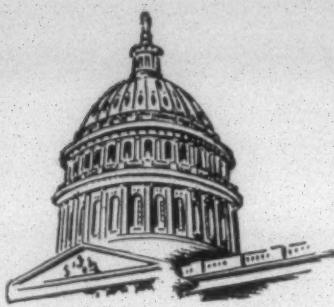
We wouldn't attempt to guess whether the dynamic machinery replacement policy of the M.A.P.I. meets the needs of the South's textile plants, but we do agree that planned and scheduled machinery turnover will help keep textiles in the South forever young.

## T.W.U.A. Pulls Out Of Tifton

We continue to see and hear reports that the C.I.O. Textile Workers Union of America is making preparations for another "all-out" campaign in the South. Up to now it has been an "also-ran" campaign, what with the National Labor Relations Board-sponsored elections that have been held during the past year.

Early this month the N.L.R.B. issued an order approving the withdrawal of the petition for election among the employees of Tifton (Ga.) Cotton Mills by the T.W.U.A. The petition was filed last February; after a hearing the N.L.R.B. directed that an election be held within 30 days of April 9. This period subsequently was extended for an additional 30 days by the labor board, at the request of the union.

Now the union has withdrawn its election request, which means simply that it got out while the getting was good.



# WATCHING WASHINGTON

[Exclusive and Timely News from the Nation's Capital]

Mr. Eisenhower is coming up squarely against the concept of vast centralized powers in government, as opposed to state and local control, and private operation. Proponents of the "welfare state" are in full cry to maintain Washington's "power grab," built up over 20 years, and beat down consistent efforts of the President to decentralize government and reduce its powers.

The issue is clearly one of turning back from the road to a socialistic state, and re-establishing traditional government. The little group of pseudo "liberals" in the Senate are fighting to hold on to every gain of power, and to defeat every move which deflates big government, or reduces in any degree the vast "inherent powers" that have been claimed under the guise of continuing "emergencies," and the New Deal's rosy blanket of national defense.

The fight on decentralization first showed in the off-shore oil lands filibuster, and continues in efforts to defeat big federal spending. Even efforts to reduce the great number of men in the armed forces, now at 3 1/3 million, are meeting determined resistance. C.I.O. and union bosses are squealing that to turn men loose from the services will throw them on a "falling labor market," and create unemployment. But C.I.O. has always favored a huge reservoir of men cooped up in the Armed Services.

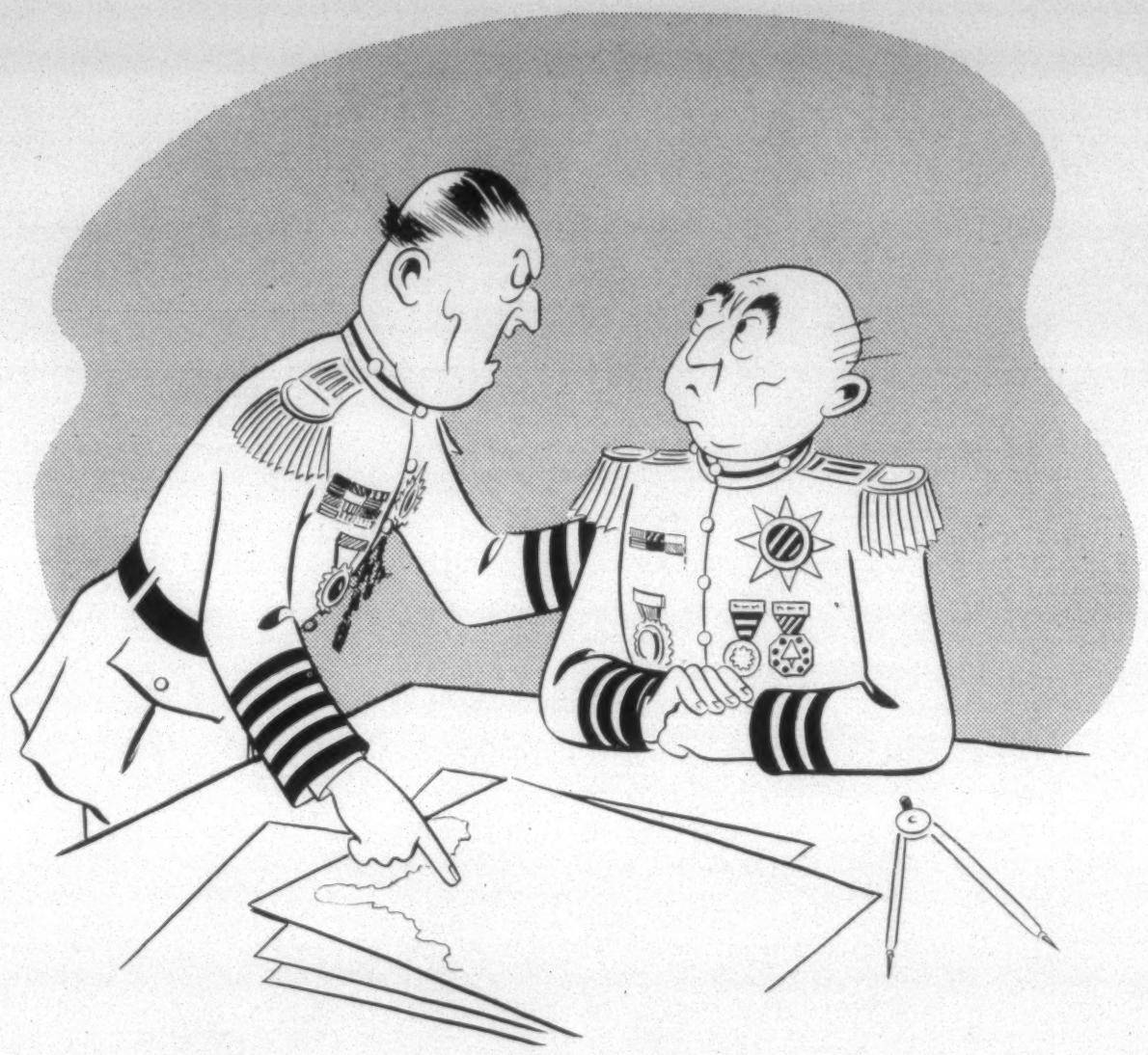
Proposed cut of \$5 billion in the money grant for the Air Force is another question in point, and based solely on academic contentions. The Air Force wants 143 wing divisions, and Defense Secretary Wilson favors 120 in so far as this year's budget is concerned. He says there is no hope of producing enough planes for 120 divisions within the next year, and meantime the question should be studied. But big government proponents insist the money for 143 divisions be slapped on the line, even with no hope of spending it.

The proposed \$5 billion cut in Air Force money will leave the nation with a reasonable state of defense, said Mr. Eisenhower. He said he is trying to build up the greatest ultimate military strength that will be bearable in years ahead. While he did not say he had made this cut himself, he declared it is the type of decision he will make if the Defense Department does not resolve it.

The fight on scaling down big government, and trimming out welfare oddities and trivialities, is putting a big question mark on how far the President can go. His main objective is becoming more and more one of balancing the budget. It can be done only through vast scaling down. The President is coming to believe his whole Administration will rise or fall on this issue of bringing spending into line with tax income.

The government is already committed and obligated for billions of dollars, mostly in military goods, inherited from Truman. Funds have been granted for these goods, but they have not been delivered, and cash is not in hand to pay for them. The President feels the scaling down must be made, or the national deficit will continue to grow during his four years. Big government has become too big to be paid for within the present range of tax income.

Cutting down the Truman budget for next year, which would entail another vast deficit, is making some headway in Congress, but not enough. The log-



"So we have ten divisions now? Well, Dillard has twelve  
with a new one right here in Atlanta!"

"If It's Paper"  
*Dillard* PAPER COMPANY  
GREENSBORO • CHARLOTTE • WILMINGTON • RALEIGH • ATLANTA • MACON  
AUGUSTA • GREENVILLE • COLUMBIA • ROANOKE • BRISTOL • KNOXVILLE

1926

Dillard Paper Company Serves the South

1953

rolling is terrific to protect pet projects in various districts and states. Even the President's warmest adherents are not supporting him on wiping out some of these projects, which in the aggregate, run into billions of dollars.

Action of the House and Senate in refusing to give authority to the President to scale down huge departmental payrolls may have disastrous consequences to the "economy" drive. The scaling down strikes at the huge bureaucracy built up under Roosevelt and Truman. Most of these things have been built up under special statutory protection, and Congress has denied the President the right to make changes outside of this protection.

All of the controversy over whether to first cut taxes, or first balance the budget, is going to naught under the assertion the budget cannot be balanced next year. Treasury Secretary Humphrey said the budget cannot be balanced because it would mean "too much risk to national security." He declined to tell the Ways and Means Committee how soon he thinks the budget can be balanced.

Ways and Means Chairman Reed said Humphrey's contention gives force to his own argument that lower taxes will bring in more total revenue. Senator Byrd (D., Va.) says the budget can be balanced, with no impairment to national security, if the Administration wants to really get down to the business of cutting out waste and squandering. The trouble is that a lot of waste and squandering is being rewritten into appropriation bills that are now going through Congress.

More spending on foreign aid is the most bitter pill facing the House and Senate as they wade into next year's appropriations. The broad question is whether the money is given to meet human needs, as has been claimed, or is going over for purely business purposes and profits. Many House members assert it is an utter fallacy to try to stop the march of Communism with tax dollars scattered on doubtful projects.

Senator Knowland (R., Cal.) is taking the lead in warning Congress that military spending cannot be heavily cut with safety. But he does say there must be sharp pruning of waste elsewhere. He says "nothing on the horizon can justify any mass reduction in armed power." But letters of taxpayers to their Senators and House members indicate they do not see it that way.

Communications from constituents and taxpayers are reaching another flood stage on the desks of Congressmen. Many of them say that national defense has become an unrealistic umbrella that is being spread over every kind of a spending project, even to the seizure of private property. Many of them question how money already granted has been spent, and under the waste and extravagance, how distant is the ultimate goal.

T.V.A. is chalking up a new record as champion beggar for funds from the Treasury, and resisting cuts in this plea for \$264 million next year. About 20,000 letters went out in one week from the T.V.A. area to people North, East and West, asking them to write their members in Congress not to cut this proposal. The letter writing was carried on by scores of organizations.

Very few top-ranking New Deal officials have been fired in changes under this Administration. For the most part, they have been shifted from one high post to another. Disgruntled Republicans in Congress say that the 20-year entrenched bureaucracy has met and conquered the President and his Cabinet. Officials at the tip top have been changed, but second line officials remain almost solidly in their posts.

The Senate voted, 70 to 0, to put Congress on record against admitting Red China as a member of U. N. This action came after the President said he would use his full influence against admission of the Reds, and seek support of

# *Color* that's a favorite on washday!



**Du Pont vat dyes** give women the kind of color performance that means less trouble on washdays. They are so completely fast that they permit colored garments to be washed with whites. And they bring further satisfaction by providing lasting attractiveness during the life of the garment.

Dependable all-around fastness to sun and suds is a feature of such dyes as Du Pont PONSOL<sup>\*</sup> and LEUCOSOL<sup>\*</sup> (anthraquinone-type dyes) and SULFANTHRENE<sup>\*</sup> (indigoid and related dyes). To help you in your choice and application of any of these uniform, deep-penetrating vat colors, our technical staff will be glad to work with you. E. I. du Pont de Nemours & Co. (Inc.), Dyes and Chemicals Division, Wilmington 98, Delaware.

*Du Pont  
Dyes*

**DU PONT**

REG. U. S. PAT. OFF.

BETTER THINGS FOR BETTER LIVING . . . THROUGH CHEMISTRY

\*REG. U. S. PAT. OFF.

WATCHING WASHINGTON

other nations. His action came as Senate leaders withdrew a controversial proposal to cut off all funds to U. N., if the Reds were admitted.

By a vote of 20 to 4, the Senate Appropriations Committee put a ban on any funds for U. N. if Red China was admitted as a member. The insertion was in the State Department's appropriation bill, and the committee acted with full powers granted to Congress in the Constitution. But the President urged them to withdraw the provision, and said he would use his influence to prevent the Reds being admitted. The Senate accepted this assurance.

More foreign aid is getting little sympathy in the House, and the feeling is this "extravaganza" must be cut to the bone. Congress has never had any explanation, except in the most general terms, as to what went with the money. When the money was granted, it was spent almost wholly as the State Department wanted. The law was so loosely drawn the money could be spent for any conceivable purpose, even as grants to well-financed and endowed private hospitals abroad.

There is grave doubt now that the Taft-Hartley Law can be brought up in both branches this year for changes. Other legislation will preclude giving time to it. Meantime, C.I.O. and A.F.L. officials say, privately, they are opposed to calling up the bill, because of "sharks' teeth" they think will be put into it.

Big industrialists are taking the stand before committees in Congress that it is the job of the Federal Government to get rid of Communists in unions. They say industry cannot do this without being charged with meddling in union affairs.

The industrialists say they are compelled by law to deal in good faith with any union certified by N.L.R.B. This is true even when the union is loaded with Communists. The law prohibits them from favoring one union over another. They point out that C.I.O., especially, has done very little to sweep out Communists at the level of local unions.

Former N.L.R.B. Member Edwin S. Smith dived behind the Fifth Amendment before the Senate Internal Security Sub-committee when asked if he is a Communist. He said his answer might incriminate him. Smith was a member of the first N.L.R.B., when loaded with Communists who ranged the country to use the strong arm of government to put Reds in unions, and to promote C.I.O. in mass production industries.

C.I.O. has not lessened its drive to obtain full control of the Democratic Party, and enlarge its sphere of influence in the Federal Government. It has given money to many House members to aid in their elections. It has worked hand-in-glove with Communists and allowed them to call strikes in munitions plants. Its members who pushed into federal service have worked steadily for them in labor disputes. C.I.O. does not want to lose these things.

A.F.L. is launching a crackdown on membership raids among its affiliated unions, and trying to get a no-raiding pact with C.I.O. A.F.L. Executive Council says raiding has reached alarming proportions, and in two years N.L.R.B. has conducted over 600 representation elections in which one A.F.L. affiliate was pitted against another.

C.I.O. is behind a scheme to induce attorneys generals of certain inland states to file a suit to seek federal title to off-shore oil lands. The allegation will be that national defense is being cheated out of the oil, and return to the states is pure robbery and "give-away." Senator Daniel (D., Tex.) said if a federal claim can be made to oil in land under water, it can also be made to oil under dry land, and to oil and minerals in all states.

# Rayon Reports

Prepared Monthly by American Viscose Corporation, New York, N. Y.

JUNE, 1953

## Rayon Information Center Established To Serve Entire Rayon Producing Industry

Announcement has been made of the formation of a Rayon Information Center, with headquarters at 670 Fifth Avenue, New York 19, N. Y. Backed by the nation's rayon producers, it will fill a long-felt need for an official voice to speak for the entire rayon industry.

Through the years, because of its versatility, rayon has remained the most important of man-made fibers. Consumption in the United States last year was over 870 million pounds. However, even in the face of this amazing volume of usage, it is recognized that the public and sometimes the trade have taken rayon too much for granted. Too little has been made of its tremendous contributions to end products.

### **Rayon's Vital Place**

It is expected that through the efforts of the industry-sponsored Rayon Information Center, rayon's vital place in the nation's economy and its importance in the lives of nearly everyone will be brought into strong, clear focus.

Among the first assignments undertaken by the Center has been the publicizing of the use of rayon in gowns worn at the Coronation.

### **Promotion Planned**

Overall plans of the Center include both public relations and advertising programs. Field merchandisers will work with retailers, converters, and others in the trade. At the consumer level a complete educational program will be put into operation.

Requests for further information from anyone associated with the textile industry will be cordially received at the Center's headquarters.

### **MAKE USE OF *Avisco*<sup>®</sup> 4-PLY SERVICE**

To encourage continued improvement in rayon fabrics, American Viscose Corporation conducts research and offers technical service in these fields:

- 1 FIBER RESEARCH**
- 2 FABRIC DESIGN**
- 3 FABRIC PRODUCTION**
- 4 FABRIC FINISHING**

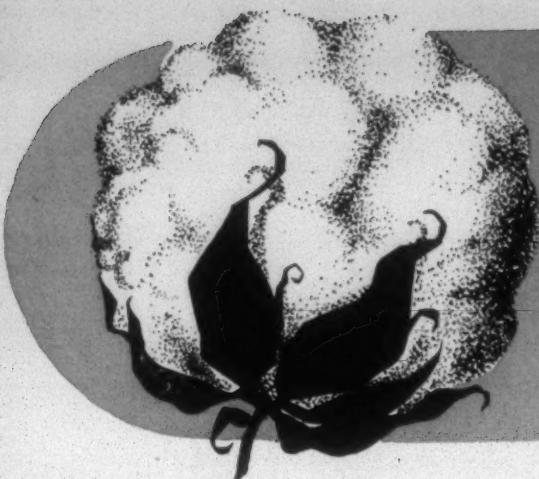
### **AMERICAN VISCOSE CORPORATION**

*America's first producer of man-made fibers*

**RAYON ACETATE VINYLON<sup>®</sup> FILATEX<sup>®</sup>**

*Sales Offices: 350 Fifth Avenue, New York 1,  
N. Y.; Charlotte, N. C.; Cleveland, Ohio;  
Philadelphia, Pa.; Providence, R. I.*

\*TMC & CUC



In the eventful years since 1922, textiles have moved into an age of marvels in fibers and fabrics. From the fundamental problems of dyeing natural fibers to the complications of dye-resistant synthetics, Gaston County has kept abreast, or ahead, of many a change.

With "know-how" increased by problems solved, we moved forward to the biggest job of all—development of a dyeing machine capable of withstanding extreme temperatures and pressures necessary to the successful dyeing of Orlon\*, Dacron† and other synthetic fibers, yet suited to conventional types of dyeing.

Meeting such revolutionary change has built for Gaston County a powerful reservoir of skill and knowledge. Why not profit from our thirty years of pioneering? Let us help you plan your dyeing operations to give you full advantage of every development . . . that can increase your production and improve your quality.



## GASTON COUNTY DYEING MACHINE CO.

\* Dupont's trade name for Acrylic fiber.

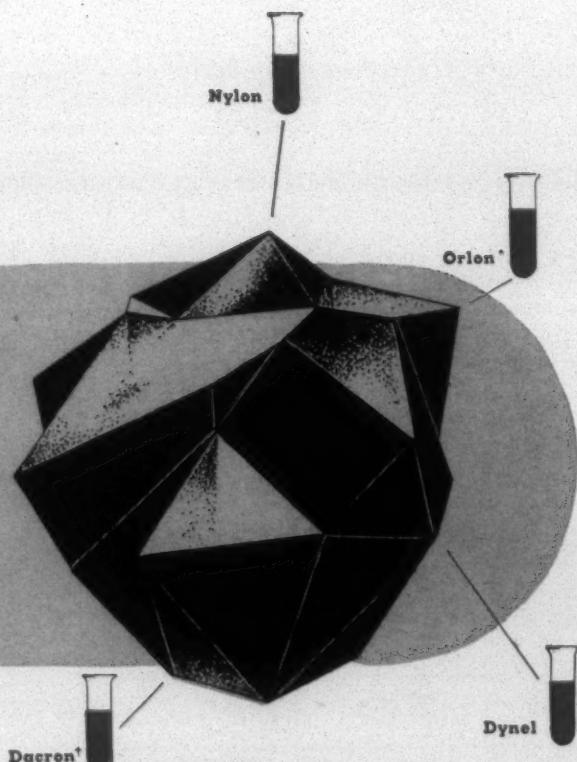
† Dupont's trade name for Polyester fiber.

Albert R. Breen  
80 East Jackson Blvd.  
Chicago, Ill.

Gaston Co. Dyeing Machine Co.  
Terminal Building, 68 Hudson St.  
Hoboken, N. J., G. Lindner, Mgr.

The Rudel Machinery Co., Ltd.  
614 St. James St., W., Montreal  
137 Wellington St., W., Toronto

FROM  
COTTON  
TO  
COAL



Pioneers in Automatically Controlled Dyeing Machinery  
Stanley, N. C.

# textile bulletin

JUNE 1953

NO. 6 VOL. 79

## South Carolina Textile Leaders Encouraged To Set Pattern Of 'Economic Statesmanship'

A GREATER awareness of industry's increased responsibilities to the general welfare under the new national administration and the avoidance, through "economic statesmanship," of the pitfalls which in the past have plagued older industrial areas provided the underlying themes of the annual meeting of the South Carolina Textile Manufacturers Association in Sea Island, Ga., May 29-30.

The keynote of much of the thinking and discussion was sounded in the annual report of the retiring president, C. A. Gibson, head of Calhoun Mills at Calhoun Falls, S. C., and the F. W. Poe Mfg. Co. in Greenville, S. C., who was given a rising vote of thanks in appreciation of his untiring efforts in behalf of the association in the past year.

Stressing that South Carolina textile manufacturers have an opportunity to set a pattern for the entire industry in "economic statesmanship," Mr. Gibson asserted that for the nation to continue to flourish and prosper each industry must seek to solve its own ills, but that this can't be accomplished by one region trying to transmit "the diseases that caused its downfall" to areas which are more adaptable to a particular industry.

The other major speaker at the convention, Robert C. Jackson, executive vice-president of the American Cotton Manufacturers Institute, also dwelt upon the changing national political philosophy and how the determination of basic governmental policy will affect various problems with which the textile industry is faced such as the controversial Walsh-Healey issue and others.

The association elected as its new president a man who has long been prominent in the textile industry of South Carolina, Marshall C. Stone, general manager and treasurer of Pacolet (S. C.) Mfg. Co., a unit of the Deering, Milliken group, who pledged himself to seek to carry forward the broad outline of objectives toward a better industry in South Carolina laid down a year ago by the retiring president.

Named vice-president was Ellison S. McKissick, president of Alice Mfg. Co. at Easley, S. C. As a matter of custom and precedent, Mr. McKissick, also a prominent leader in the industry, will become president of the state association at its meeting next Spring, which will also be held at Sea Island, where the South Carolina manufacturers have met now for the last three years. Mr. McKissick was the last president of the old American Cotton Manufacturers Association before its dissolution and the first president of the new American Cotton Manufacturers Institute,

formed five years ago. John K. Cauthen of Columbia is the association's executive vice-president.

The association elected three new directors for three-year terms: Walter S. Montgomery, Spartan Mills, Spartanburg, S. C.; Elliott W. Springs, Springs Cotton Mills, Lancaster, S. C.; and Stanley W. Converse, Clifton (S. C.) Mfg. Co. George McElroy, Owens-Corning Fiberglas Co., Anderson, S. C., was also elected to the board of directors to fill the unexpired term of Mr. McKissick, the new vice-president.

Some 200 textile manufacturers and their wives attended the two-day meeting at The Cloister. Guests included Gov. James F. Byrnes of South Carolina; H. K. Hallett of Charlotte, N. C., president of the American Cotton Manufacturers Institute and also president of the North Carolina Textile Manufacturers Association; State Senator George L. Grantham of Pickens County, S. C., and others.

"I am sure that the challenge of the future in our industry is going to be in what kind of job we are doing, especially in the fields of industrial and public relations," Mr. Gibson said. "The new administration in Washington is supposedly friendly toward industry. For many years we have been asking for *economic* as well as *personal* freedom. Some of us didn't like the deal we got under the Fair Deal and the New Deal. We have now been given the ball to run with and the people of this country are going to see what top management is going to do with it."

"The real challenge is going to be whether we are smart enough to meet the responsibilities that we assume when we demand *economic* and *personal* freedom. These responsibilities, as I see them, are, first, responsibility to our customers and public for the furnishing of products which they want at a price they can pay, as well as assisting in community, church, civic and political affairs. To put it differently, just being a good American citizen who accepts and fulfills his civic responsibilities.

"Secondly, we have a responsibility to our employees to provide steady employment at fair pay, under pleasant working conditions. We complained about being hemmed in by the Deals and how much better we would do if we did not have economic controls. We now have an opportunity and a responsibility to show what we can do and we better not muffle the ball."

"Lastly, we as managers, have a responsibility to our stockholders and owners. I realize there are two or three here who can put their feet up on the desk and have a stockholders' and board of directors' meeting at one and

the same time, but most of us have many stockholders looking to us to operate our mill in such a fashion that a reasonable profit can be made and a reasonable dividend can be paid.

"In the field of politics, a politician has been described as one who always guides his actions constantly keeping in mind the number of votes he expects to get. A political statesman is one who always guides his actions by what is best for the country as a whole with little attention as to what it may mean to him personally.

"In the field of economics, an economic politician is one who guides his actions thinking only of what it may mean to him personally, or his individual plant. An economic statesman is one who guides his actions and conducts his business whereby not only his plant, his employees, his community, but also his nation can prosper regardless of the criticisms that he may have to take. We are the greatest of the textile states—in fact, we are *the* textile state. The management in the textile industry in some sections of our country seems to be manned more by economic politicians who feel that the solution of their problems can only be obtained through the connivings of political politicians.

"Freedom and prosperity in the United States can only be continued if each industry tries to solve its own ills. Prosperity cannot be continued if industry tries to solve its ills as some Senators are recommending merely by trying to give the diseases that caused its problems and downfall to other areas which may be more adaptable for that particular industry.

"South Carolina understands what having problems means. Indigo and rice were the big crops at one time. They have passed on. Cotton raising is diminishing as a major industry in our state. Our farmers have and are solving their problems through progressive action—not complaints.

"It seems to me that we have a real opportunity in South Carolina to set the pattern for the entire industry by showing that the textile industry of South Carolina is successful because it is being operated, not by economic politicians, but by economic statesmen who are facing up to their responsibilities to the general public, its customers, to their own employees and to their own stockholders. By meeting these responsibilities we can set a pattern that will show that we are true Americans trying to keep the United States the greatest country in the world in which to live."

Mr. Gibson said that there has been a growing realization in the textile industry in South Carolina of the importance of maintaining good public relations, and cited the improvement of community relations through various types of activities, such as special tours and open houses for the benefit of educational groups, clergymen and civic groups.



Marshall Stone  
New President



E. S. McKissick  
New Vice-President

An extra feature of public relations activities during the year, he said, has been the circulation by the South Carolina association of two prints of the Textile Information

Service color film, "The Greater Goal," which has been shown to a very large number of mill groups, civic groups, and other audiences throughout the state.

"These films have been in constant demand and in constant use," he said. "We expect to use them in those sections of the state where textile plants are not located as soon as the demand in the textile areas can be met. We think it an excellent idea for people in other sections of the state to have an opportunity to see just what our industry is doing and what it means to the state as a whole."

Mr. Jackson, who addressed the association at its closing session, told the manufacturers that the basic issue in government is a question which arises from a long-standing difference of opinion as to what the role of government should be—whether the concept of government is that of "the master of the people or the servant of the people."

He observed that "time after time we have been impressed by the fact that we have been forced into controversies which were the aftermath of arbitrary actions by the administrators of a given law or policy, situations in which we encountered government by administrative fiat, where individuals in authority made personal decisions at variance with the original intent of the people and the Congress."

This actually, he explained, is the "crux" of the court challenge brought by 209 mills against the Secretary of Labor concerning application of the Walsh-Healey Public Contracts Act. He predicted the case would come up for formal trial during the Autumn but that it would be appealed regardless of which side wins.

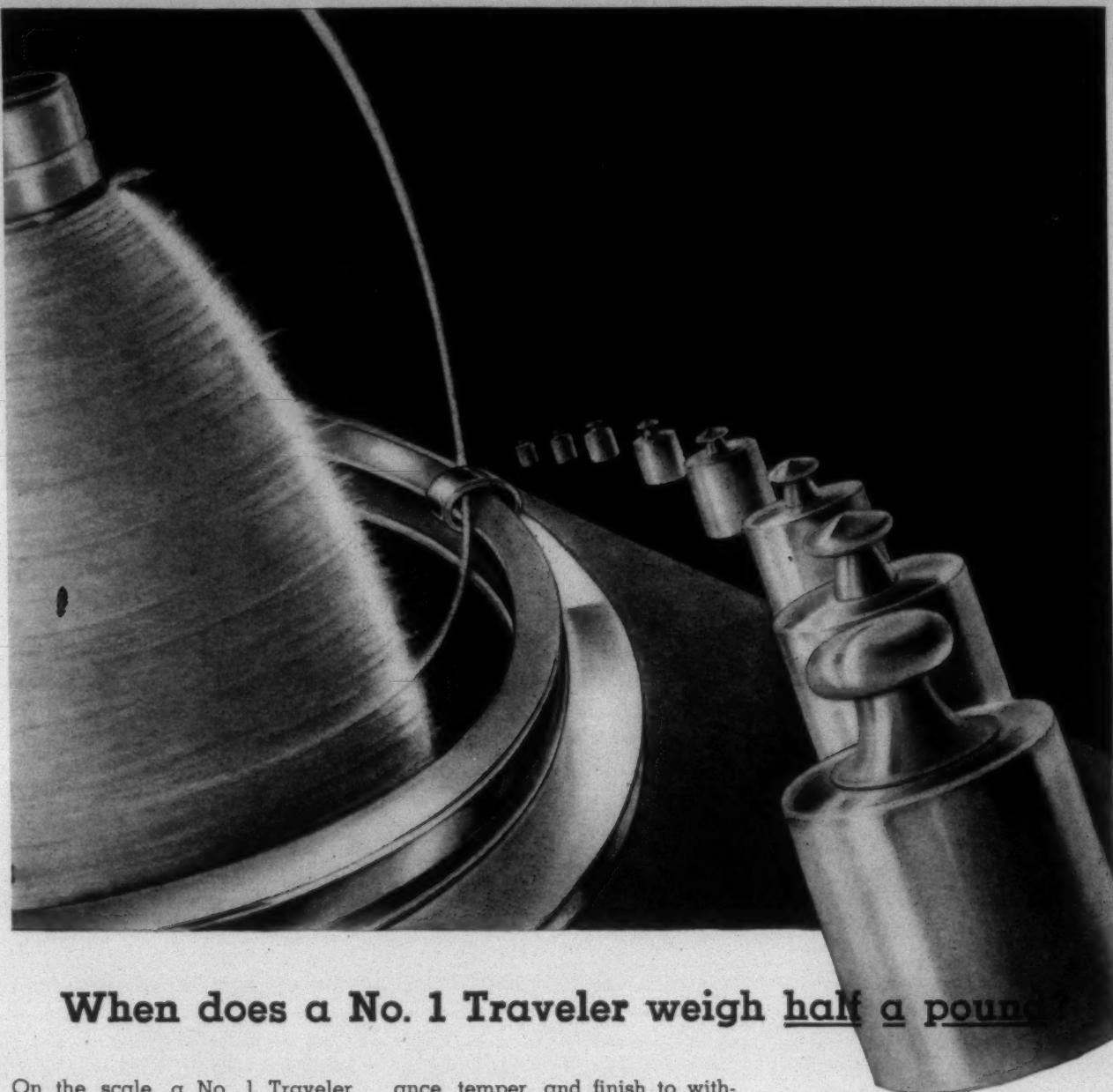
The A.C.M.I. executive expressed regret that there had been misunderstanding about the Walsh-Healey issue, and emphasized that the A.C.M.I. at no time has questioned the amount of the minimum wage determinations, but instead is seeking a final decision on the principle involved, which he said was "the concentration of wage fixing power within one agency, or a single official, whose decisions apply to an entire industry throughout the United States."

Similarly, he said, the Taft-Hartley Labor Relations Act is in need of improvement because it has been subjected to "biased administration" over the years by the National Labor Relations Board.

On the question of foreign trade policy, the A.C.M.I. executive said the textile industry has ample reason for its lack of confidence in reciprocity, in view of past administrative shortcomings, and actions by foreign countries which have "abused" the Trade Agreements Act. Additionally, further tariff reduction as a substitute for foreign aid is not the remedy for international trade confusion, he said, and that to undermine agriculture and certain basic industries like textiles by removal of protection would be the "surest way" to unemployment and depression and a "further worsening" of the world trade situation.

"The only basic solution to the world trade problem, in which the textile industry has so much at stake, is to eliminate the network of embargoes, exchange restrictions, multiple exchange rates, and similar barriers, replacing them with programs of international co-operation aimed at better balanced economic development and by increasing consumption," he declared.

To seek such a solution, he said, would be the purpose of a high level governmental study, as was recommended by the A.C.M.I. convention in March and subsequently proposed by President Eisenhower, and this is why the textile



## When does a No. 1 Traveler weigh half a pound?

On the scale, a No. 1 Traveler weighs 1 grain, but riding the rings at today's high speeds, it exerts an amazing "pull".

By applying simple dynamic principles to known factors, the centrifugal force can be calculated. For a No. 1 Traveler operating at 9600 r.p.m. spindle speed on a  $2\frac{1}{2}$ " ring, this force is 3250 grains — almost half a pound!

Consider how this intensifies conditions of wear and friction. You'll see how important it is to choose travelers of the proper bal-

ance, temper, and finish to withstand this punishment without interrupting the smooth flow of yarn production.

Victor Travelers are made to serve longer — to deliver more pounds of yarn per traveler — under the toughest conditions. That's why they are first choice of economy-wise mill men for more than 10,000,000 of today's hard-working spindles.

Whether you are running conventional fibers, synthetics or blends, talk to a Victor Service

Engineer about your traveler problem. Write, wire, or phone the nearest Victor office . . . for prompt service.



**VICTOR**  
**J Ring**   
**Travelers**

**VICTOR RING TRAVELER COMPANY**

PROVIDENCE, R. I. . . . . 20 Mathewson St. . . . . Tel. Dexter 1-0737

GASTONIA, N. C. . . . . 358-364 West Main Ave. . . . . Tel. 5-0891



Among those attending the convention of the South Carolina Textile Manufacturers Association (left to right): Samuel H. Swint, president of Graniteville Co., Gov. and Mrs. James F. Byrnes, and Mr. and Mrs. Charles Daniel of Daniel Construction Co.

industry endorses the administration's plan for a one-year extension of the Trade Agreements Act.

The J. E. Sirrine Textile Foundation, through which South Carolina textile manufacturers in the last few years have contributed about a million dollars to foster textile education at Clemson College, received a report revealing that the School of Textiles at Clemson now has approximately one-fourth of the total enrollment at all the ten college-level textile schools in the nation. George M. Wright of Abbeville, S. C., is president of the foundation.

A report from Dean Hugh M. Brown of the textile school showed that for the fourth year Clemson has had the largest enrollment of any textile school, and has had an average of 592 students for the two semesters. There were 96 graduates in February and June, which with the August class will make the total approximately 110 for the year.

Dean Brown reported that the demand for these textile graduates is very great. More than half of the graduates have to enter the military service upon graduation but men having completed this period of service are beginning to return to the industry. It was pointed out that while the Clemson textile school enrollment is the smallest since the war, it is only a little off from last year.

Research during the year led to completion of several different machine improvement projects, some of which are being taken by machinery builders to manufacture for the industry. Dr. Brown expressed the view that research, enabled by the use of Sirrine funds, has helped the school to obtain many such projects and "only by having this research program can we hold many of our better men."

During the past year the following developments have been made by the Clemson textile staff without outside funds, Dean Brown reported: (1) A device for use with Pneumafil to indicate when an end is down on spinning frames or to stop roving frames when an end is down. (2) A picker lap meter suitable for permanent mounting on pickers to show instantaneous weight of lap at all times. (3) Flat bundle tester having uniform rate of loading and adjustable gauge length. (4) A new leno device not using dousps by which full turn leno (or even more than full turn) may be intermixed by pick with ordinary leno or plain weaving.

Joe Lyons, Orr Mills, Anderson, and Ellison S. McKissick, Alice Mfg. Co., Easley, were elected to the board of directors of the Sirrine Foundation.

L. O. Kimberly Jr., of Atlanta, Ga., manager of the associations' traffic department, reported to the membership that new minimum rates published by motor carriers, effective within the South and between the East and the South, will completely disrupt the competitive relationship on South Carolina's textile products.

The new rates, he said, provide for 55 per cent of first class as the lowest rate on textile shipments between South Carolina and Northern or Eastern states and a 50 per cent increase on shipments from other Southeastern states.

The traffic department has protested these rates and has instituted investigations of their lawfulness, Mr. Kimberly told the convention. A hearing on the rates was to be held by the Interstate Commerce Commission in Washington beginning June 23.

The general increases in rail rates amounting to 15 per cent on traffic general and 40 cents a ton on coal, are scheduled to expire February 1954. However, these railroads have filed to have these increases made a part of the general rate structure and continued indefinitely.

The exceptions and commodity rates were continued on textile products pending further consideration of the effect which the new rates and ratings would have on some of the new types of fabrics. Meanwhile, specific adjustments of rates on textile products continue to be made as found to be necessary.

Other speakers at the convention included C. A. Johnson of Republic Mills, Great Falls, S. C., a unit of J. P. Stevens & Co., and Dr. Kenneth McFarland of Topeka, Kan., educational consultant for General Motors.

Committee reports were submitted as follows: personnel division—E. W. Marshall, Reeves Bros., Spartanburg; cotton buyers division—J. D. French, Kendall Mills, Newberry; legislative committee—F. E. Grier, Abney Mills, Greenwood; insurance committee—A. Z. F. Wood, Springs Cotton Mills, Lancaster; resolutions committee—George M. Wright, Abbeville.

The association was host at a reception for members and guests in the clubrooms of The Cloister. A golf tournament and a skeet shoot were also held. The social program also included a fish-fry supper on the beach, followed by entertainment and dancing. On behalf of the members, James A. Chapman, Inman (S.C.) Mills, presented the retiring president, Mr. Gibson, and Mrs. Gibson a silver pitcher and tray.

An international exhibition of textile machinery and accessories, sponsored by the *Textile Recorder*, English trade journal, will be held Oct. 14-24 at Belle Vue, Manchester, England. The last such exhibition was held in Manchester in October 1949 and attracted thousands of visitors from every textile-producing country in the world.

The exhibition management describes the event as an unrivaled opportunity to see anything that is latest and best in textile machines and methods; a unique collection of the finest products of the world's leading textile machinery makers has been brought together under one roof for the inspection of the world's buyers.

Nine countries will participate in the exhibition which will have 250 exhibitors occupying some 90,000 square feet of floor space.

# WHY ALGOSOLS

## AN EASY ROAD TO VAT FASTNESS

**ALGOSOLS** are water soluble esters of vat dyes. They produce the same brilliant shades and have the same fastness properties as the parent vat dyestuffs from which they are derived. On cotton and rayon they are more level dyeing and have better penetration than ordinary vats. Prints are smoother and clearer than normally applied vat dyestuffs. On wool Algosols have superior light and wash fastness without impairment to the quality of the wool. The method of applying Algosols is simple and inexpensive.

### COTTON

Mercerized cotton piece goods of constructions otherwise difficult to color, have outstanding smoothness and penetration when dyed with Algosols. The shades of colored yarns used for cross-dyed effects in striped shirtings, etc. are not affected when over-dyed with Algosols. Mercerized and other types of cotton yarn dyed in package dyeing equipment are uniform, evenly colored from outside to center and free from crossovers.

### RAYON

Rayon piece goods composed of filament, spun rayon or filament-spun rayon yarn when dyed by the continuous method or on the jig have solid, clear shades and excellent fastness. Rayon skeins are easily dyed on the 'Cascade' type machine. Algosols are excellently suited for dyeing packages and cakes in pressure dyeing equipment.

### MIXED FIBERS

Suitings and dress goods of spun rayon and wool blends dyed in solid shades meet all fastness requirements. Special effects can be obtained on cotton-wool and rayon-wool mixtures by dyeing the wool and leaving the cellulosic fibers undyed or on viscose-acetate blends the viscose can be dyed fast color and the acetate tinted to yield two-tone effects.

Technical information, product samples and the service of a highly trained technical staff are yours for the asking.

### WOOL

Suitings dyed with Algosols have excellent fastness properties even in light shades. Blankets and knitting yarns have outstanding fastness to light and washing. Algosols are recommended for dyeing slubbing and yarns in circulating machines. Shrink-proofed wool dyed with Algosols has excellent fastness to light and repeated washings. Wool can be dyed with Algosols without impairment to the quality of the wool.

### PRINTING

In roller, screen and resist printing prints are smoother and colors clearer than the normally applied vat dyestuffs from which they are derived. Algosols have excellent light and wash fastness and do not crock. Blotch printed drapery fabrics have smooth grounds with excellent fastness to light and washing. Algosols are ideal companion colors for Rapidegens and Fast Color Salts.

### COST

The simplicity of application, saving in time, lower cost of chemicals, superior dyeing and printing results offset any increase in dye cost over ordinary vats in light and medium shades. Not infrequently Algosols prove cheaper in light shades.

✓ **DELIVERIES**  
Stocks are carried  
in warehouses  
located throughout  
the country.



**GENERAL DYESTUFF CORPORATION**  
**435 HUDSON STREET • NEW YORK 14, NEW YORK**

BOSTON • CHARLOTTE • CHICAGO • PHILADELPHIA • PORTLAND, ORE. • PROVIDENCE • SAN FRANCISCO

FROM ANDROSCOGGIN, ME. TO CHATTAHOOCHEE, GA.

RIGHT THRU THE INDUSTRY

LEADING MILLS WET-PROCESS WITH

# Westvaco

## TEXTILE CHEMICALS



Low-cost quality that appeals to Yankee acumen . . . courteous trustworthy service that makes friends in Dixie . . . up and down the Atlantic seaboard, more and more mills are specifying "Westvaco" on their alkali and phosphate orders.

With alkali production at South Charleston, West Virginia and phosphate production at Carteret, New Jersey, we can give you excellent service by rail or truck; carload or l.c.l.; in tank cars, tank trucks, drums or bags, as the case may be. Combination orders can cut your costs at a time when every penny counts. Scan the list at the right and let us quote you on a fair share of your needs for any of these Westvaco Chemicals.

### CAUSTIC SODA

Flake, Solid and Ground, 76% Na<sub>2</sub>O  
50% and 70-73% Liquid

### CAUSTIC POTASH

Flake, Solid and 45% Liquid

### PHOSPHATES

Dipotassium Phosphate  
Disodium Phosphate  
Monosodium Phosphate  
Sodium Hexametaphosphate  
Sodium Tripolyphosphate  
Tetrapotassium Pyrophosphate  
Tetrasodium Pyrophosphate  
Potassium Phosphate Liquor  
Acid Sodium Pyrophosphate

### WESTVACO CHEMICAL DIVISION

FOOD MACHINERY AND CHEMICAL CORPORATION

GENERAL OFFICES • 161 EAST 42nd STREET, NEW YORK 17

CHICAGO, ILL. • CINCINNATI, OHIO • CHARLOTTE, N. C. • DENVER, COLO.  
ST. LOUIS, MO. • LOS ANGELES, CALIF. • NEWARK, CALIF.  
PHILADELPHIA, PENN. • PITTSBURGH, PENN. • VANCOUVER, WASH.



associations which deal with labor matters or with trade policies or both.

#### The Cotton Board

A body representing the industry as a whole was formed in 1925—the joint committee of cotton trade organizations. Chaotic conditions in the industry lead to the passage of the Cotton Industry Reorganizations Act of 1939. This act endeavored to impose compulsory minimum prices with power of control in a Cotton Industry Board. The Cotton Industry Reorganization Act was suspended at the outbreak of the war in 1939 but a Cotton Board was created in 1940 to act as liaison between the industry and government departments during the war period. The board was independent, being financed by the industry by a levy on all raw cotton used. This non-governmental body, having satisfactorily discharged its wartime functions, was put on a permanent basis as provided in the Industrial Organization and Development Act of 1947. The board is composed of members of employers organizations, trade unions, and independent representatives. All are appointed by the Board of Trade as individuals having special knowledge of the industry. The board is not responsible to or dependent on sectional organizations and under the new law the basis of the board's financial support was changed from a levy on raw cotton consumed to a levy on running spindles.

For the past several years the board has assisted in the recruitment of and in the training and education of textile workers. While it studies many of the problems that concern the cotton industry, it does not participate in wage and hour negotiations.

The Cotton Board has directed and encouraged experiments in re-deployment—the better use of labor in improved mill layouts—and has published facts showing the increased productivity in mills where re-deployment systems have been introduced.

Realizing that no re-deployment system can work without the co-operation of labor, an active educational program has been carried on throughout the industry. Re-deployment has found favor in the weaving industry but it is still opposed by certain union leaders. For example, Archie Robertson, Oldham district secretary and national president of the Cardroom Operatives Union said: "If it means eliminating the processes we have no objection. We have always encouraged it in our union. If it means a heavier workload then we must consider our workers' health and well-being. Already cardroom operatives are producing as much as pre-war though they are 30 per cent fewer in number. If it means a stop-watch, then it is degrading and inhuman."

Obviously the educational program is not completed and management must convince many laborers that reduction of cost of production is essential to meet foreign competitors in the world market. In the meantime many mills are undertaking modernization and re-equipment programs in order that the Lancashire cotton industry may continue to supply the needs of certain foreign markets.

#### L-O-F Doubling Fiber Glass Capacity

Orders have been placed for machinery and equipment to double the textile fiber glass capacity of the Fiber Glass Division of Libbey-Owens-Ford Glass Co., Parkersburg, W. Va., it was announced recently by J. M. Johns, general manager. The expansion program will mean the installation of

48 additional producing units for taking textile fiber glass, and will require a year to complete, said Mr. Johns.

The Libbey-Owens-Ford fiber glass operation started late in 1951 and includes both superfine blanket-type insulating fiber glass as well as the textile fibers, both types of product being produced at plant capacity. Employment is now about 500 and the expansion of the textile operations will add about 175 employees, it was announced.

"Rapidly increasing demand for textile strand for the reinforcement of plastics with the increasing interest of automotive manufacturers in such materials, plus the use of industrial fiber glass cloth, have governed our company in making the expansion commitment," said Mr. Johns.

The installation of new fiber glass producing units will mean some rearrangement of other machinery, addition of glass marble-making capacity, and the installation of additional textile machinery for the winding, twisting and plying of glass yarns.

Increases in efficiency are expected with the additional units because little change will be required in the basic power, water, fuel, shipping and other facilities at the Parkersburg plant.



DOFFER ROLLS WITH NYLON-BRISTLED BRUSHES, developed by the Atlanta Brush Co., are getting smiles of approval here from George B. Snow (dark suit), who is now in his 40th year with the company, and Alfred W. Dillard, who has been with Atlanta Brush for more than 25 years.

After two years of continuous use in a trial installation the brushes showed no apparent wear. Use of these brushes is said to produce a finer pulverized mix of the cotton fibers as they are removed from the lattice pin aprons on feeders and picker hoppers. This is apparently due to the brush-equipped doffers performing more efficiently to straighten and fluff-up the cotton lint as it comes from the bale. The brushes, manufactured by the Atlanta Brush Co., are said not only to lower initial costs but upkeep is also reduced because of less frequent replacement. Nylon-bristled brushes also produce less drag on the machine, thus lowering power requirements.

# The Carolina Yarn Association Outing

WITH traditionally perfect weather prevailing, over 500 members and guests of the Carolina Yarn Association gathered at Pinehurst, N. C., May 14, 15 and 16 for the annual outing, rated as one of the most enjoyable events in textile circles.

Golf, of course, was the major attraction and there was a record-breaking entry list of 368 in the 36-hole tournament, with the players privileged to play Courses 1, 2 and 3 at Pinehurst, or other courses at Pine Needles and Mid Pines.

The skeet tournament, which is gaining in popularity each year, attracted 74 entries. Those who did not participate in either sport, whiled away the time at bridge or "shooting the breeze" in the shade of the long leaf pines on the lawn of the Carolina, headquarters hotel.

McDaniel Jackson was low net winner in the golf tournament with a 128 and will have his name engraved on the association trophy as 1953 champion. In addition to the trophy, which he may retain for the ensuing year, Mr. Jackson also received a handsome prize as a permanent keepsake. Low gross honors went to Albert Neal, who shot a sizzling 134. Mr. Neal was the low net winner last year.

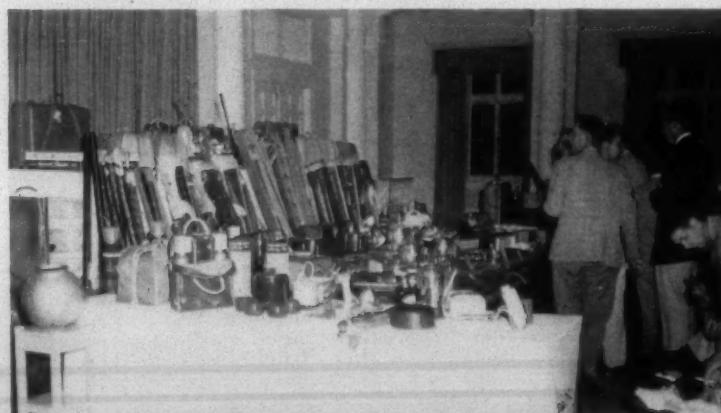
L. E. Ham and Lee Pickens tied at 136 for second low gross, with Mr. Ham winning in the draw. Second low net

also was a tie, Bob Walker and R. I. DeVine each ending up with 132. In this draw, Mr. Walker was the winner.

Other golf prize winners were: C. A. Connell, J. B. Harris Jr., R. C. Tedards, D. Cunningham, W. M. Barnhardt, W. H. Barnwell, W. S. Foster Jr., R. H. Phillips, C. Carter Lee, T. C. Jolly, A. J. New, S. Flood, O. B. Ashburn, J. J. Ryan, J. M. Tully, T. H. Miller, R. O. Haas, Oliver R. Cross, T. C. Race, I. M. Schey, W. E. Allen, J. C. Self Jr., H. L. Poley, H. A. Strickland, C. J. Stokes, W. D. Clark, G. E. Norman Jr., Carl Ferenbach, C. F. Goldsmith, J. E. Bell, J. W. Turner, W. B. Harmon, Ken Horne, J. S. Kenrick, E. F. Skinner, F. C. W. Timson, W. Hoesel, F. Ted Toole, H. R. Holt, D. M. Holsenbeck Jr., C. Gaither, F. P. Barrie, J. Reid, J. C. Fortune, Don Maddox, H. Kellett, J. A. Martin, T. B. Baldridge, G. Jennings, J. R. Gaither, W. P. Watkins, N. J. Heaslip, Jack C. Thompson, Walter C. Brown, R. C. Thatcher Jr., G. M. Shipman, M. V. Macfarlane, J. D. Pell, Paul R. Tamplin, James Johnson, M. R. Dalton, Art M. Spiro, W. Evans, W. S. Foster Sr., C. E. Crutchfield, H. B. Summerell, G. Kenna, E. S. Davis, R. Hanson, E. E. Jones Jr., J. B. Rhame, Randolph A. Walker, W. T. Cheatham Jr., F. D. Frissell III, E. J. Hanson, L. Lavitt, H. Horrock.



From left to right: "Sure-Shot" Beale Faucette, who broke 25 straight in the skeet shoot; Mac Jackson, awarded association trophy for his golfing low net of 128; Albert Neal displays his prize of four woods (his 134 was low gross for the tournament, whereas last year he won low net); Bob Walker, second low net winner, smiles over his set of irons; Lee Pickens remembered the "Missus" in selecting this kitchen appliance as prize for third low gross.



A bountiful table of prizes was the reward for good scoring; Joe Bailes (left) receives first prize in skeet from Jim Rogers.



C. A. New, T. C. Wilmerding, R. M. Johnson, J. B. Frierson, T. C. Worth, C. Wolcott, W. W. Greene, R. T. Amos Jr., Harold Mahon, C. E. Wood III, F. T. Roberts, W. F. Harper, D. R. Johnston, F. Dusch, H. A. Aken, T. C. Smothermen, E. Hunter, J. L. McCormick, S. E. Isley, P. Hemmerich Jr., L. J. Albertson, M. S. Mullen, J. T. Kilpatrick, R. Wagner, L. S. Niegelsky, J. W. Furr, J. M. Ulmer, J. H. Rice, J. W. Hill, William H. Ward, J. L. Cole, F. C. Stough, J. W. Malloy, M. B. Crigler, J. M. Mullichampe, Leo Keiger, E. Lunday, C. B. Conway, J. V. Benfield, Fred Dunear, B. P. Freeze, W. E. Bassett, R. H. Langford, W. R. Reed.

In the skeet tournament, Joe Bailes captured top honors by breaking 71 out of a possible 75. Other skeet prize winners and their scores were: Class A—Dave Long, 67; Jack Holbrook, 66; M. L. Thompson, 65. Class B—George Lewis, 60; Perry Parrott, 60; Gene Cross, 59; Amos Ragan, 59. Class C—H. T. Cosby, 55; C. E. Boger, 55; Dave Lindsay, 55; D. Timanus, 54. Class D—H. B. Wellford, 46; Dick Grey, 46; Ivey Cowan, 45; Lee Keiger, 45. Class E—T. Kearns, 36; Bennett Rose, 36; L. F. Cranshaw Jr., 34; L. E. Chittum, 34. Consolation prize for low score, Sam Huffstetler, 6.

There were a number of tied scores and the winners had to be determined by matching. Jim Rogers and F. W. (Skinny) Warrington each broke 66 and were entitled to a chance at the prizes but graciously withdrew their names from competition because they were members of the skeet committee.

The annual banquet was held Friday night and was followed by an excellent floor show. Golf, skeet and draw prizes, the latter provided for non-participants in the tournaments, were awarded in the ball room following dinner Saturday evening. Bill Yates, chairman of the prize committee, was commended highly for his selection of the more than 150 handsome awards.

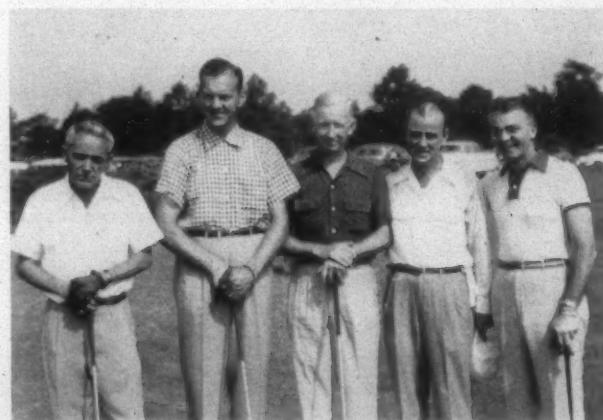
Only those who are responsible can appreciate the numberless details involved in arranging an affair of this kind, and the success of the 1953 C.Y.A. outing must be credited to the efficient manner in which the details were handled by President Elliott J. Neal, the other officers and committeemen. Current officers of the Carolina Yarn Association are: Elliott J. Neal, president; John F. Stickley, vice-president; J. M. Ulmer, secretary; Norman F. Cocke Jr., treasurer.

The committees: invitation—Pen Wilson, chairman, D. R. Jonas, C. R. Ibach Jr., Donald Fisher; skeet—W. C.

Dodson, chairman, James Rogers, F. W. Warrington; prizes—William J. Yates, chairman, John Watlington, Mac Jackson; refreshments—Charles E. Wood, chairman, Albert G. Myers Jr.; entertainment—J. W. Mitchell, chairman, Henry Stokes; golf—W. D. Clark, chairman, H. Gordon Kenna, Derrick Schoenfeld, Archie Booker, John Reid, H. L. Waters.

Members of the Carolina Yarn Association are: Aberfoyle Mfg. Co., American Bemberg Corp., American Enka Corp., American Thread Co., American Viscose Corp., American & Efird Mills, C. A. Auffmordt & Co., Barnhardt Bros. Co., Cannon Mills Inc., Carolina Process Co., Celanese Corp. of America, Comer-Avondale Mills Inc., Cosby & Thomas, William H. Crenshaw, Dixie Mercerizing Co., Duffy Silk Co., The Duplan Corp., E. I. du Pont de Nemours & Co., B. F. Goodrich Co., Grove Nylon Co., Oscar Heineman Corp., Hemphill Co., Hickory Throwing Co., E. C. Holt & Co., Industrial Rayon Corp., Johnston Mills Co., Kahn & Feldman Inc., Kaumagraph Co., Lassiter Press, Leon-Ferenbach Inc., John P. McGuire & Co., North American Rayon Corp., Paramount Textile Machinery Co., Pickett Cotton Mills Inc., Scott & Williams Inc., Sellars Mfg. Co., Smith, Drum & Co., Sonoco Products Co., Southern Franklin Process Co., Southern Mercerizing Co., Standard-Coosa-Thatcher Co., John L. Stickley, A. M. Tenney Associates Inc., Textile Banking Co. Inc., Textiles Inc., Textile Machine Works, the Torrington Co., Universal Winding Co. (Atwood Division), United States Testing Co., Waddill Printing & Litho. Co.

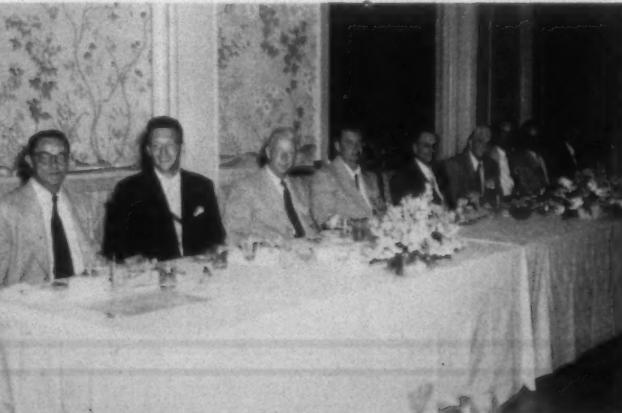
Associate members: H. Brinton Co., Richard V. Butler, Collins & Wetzel Inc., Crompton-Richmond Co., Cross



Bill Gaither, Jim Eskridge, Jim Mitchell, Bill Barnhardt and Ken Mayer.

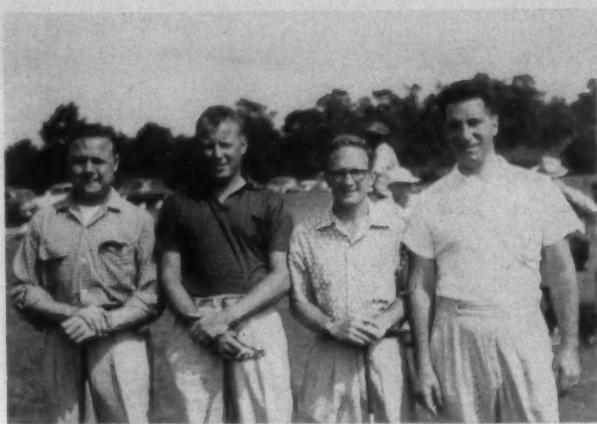


A lawn party for those who didn't care to blast, either on skeet range or golf course; head table at the annual banquet.

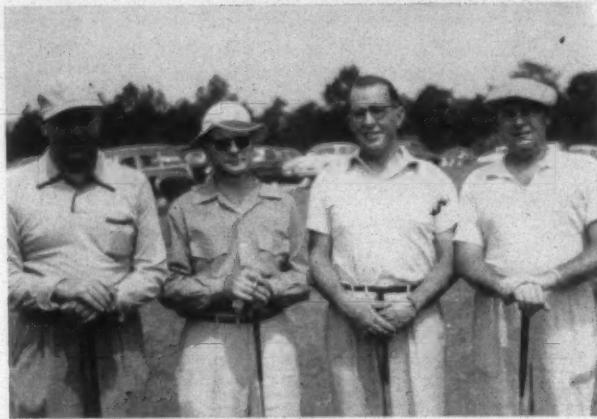




Frank Roberts, Joe Rhame, Harold Mahon and W. M. Mitchell.



Masten Dalton, Reid Durbin, Dick Johnson and Fred Jordan.



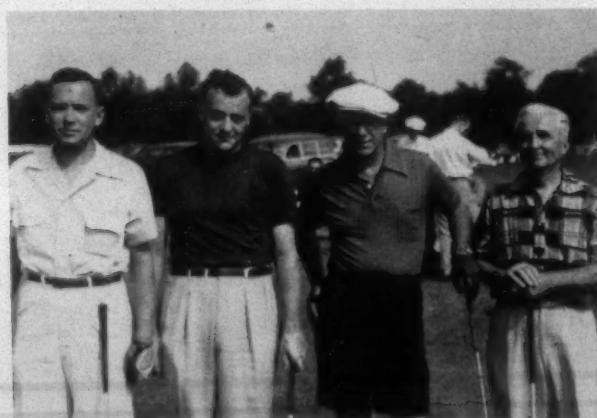
Eugene Cross, Frank Goldsmith, Oliver Cross and Albert Neal.



W. F. Franck, H. T. Cosby, M. P. Tully and Henry Stokes.



W. L. Penn, Rush Dickson, J. L. Gregory and T. C. Smotherman.



Clark Worth, Claude Hayden, Buck Cheatham and Brown Mahon.

Cotton Mills, Durham Spinning Mill Division of Durham Hosiery Mills, John E. Fox, Hickory Dyeing & Winding Co., Hubshmann Factors Corp., William Iselin & Co., Harold Mahon, Madison Throwing Co. Inc., Meinhard, Greeff & Co. Inc., National Credit Office, Royersford Needle Works, John J. Ryan & Sons Inc., James E. Taylor Co., Trust Co. of Georgia, Wachovia Bank & Trust Co., F. W. Warrington.

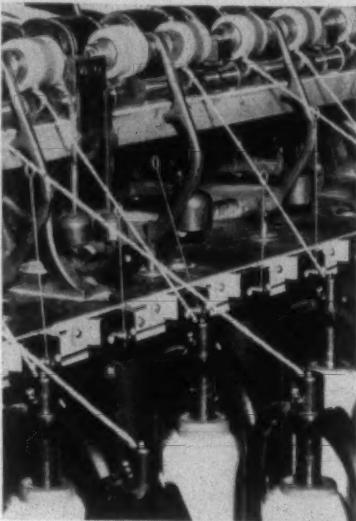
### Coats & Clark Inc. Offer Fellowships

Coats & Clark Inc. has made available three Fellowships for graduate study and research in the field of textile technology at the Massachusetts Institute of Technology. Holders of bachelor's degrees in chemical engineering and other fields of engineering or science from approved schools are eligible. Each Fellowship carries an award of \$1,800 per academic year which will pay for tuition and a share of living expenses. The awards are made on the basis of academic performance and professional promise.

The purpose of these Fellowships is to encourage research and to stimulate an interest in technical training to supply the need for scientifically trained personnel for the thread industry of the United States.

Since its inception in 1946, ten men have been recipients of the Fellowship and some for more than one year. Of this number two men, C. C. Kemp and R. E. Seaman, received degrees of Doctor of Science. Six of the men received Master of Science degrees in textile technology, one of whom, S. Backer, continued later for his Doctor of Science degree. The other two men, R. S. Roberts and M. A. Halpern, expect to get their Master of Science degrees this month.

WITH THIS  
**ROVING STOP** Motion  
You'll Realize These Savings:



Less Waste  
Less operator time  
Less ends down  
Full frame production  
Improved yarn quality  
Low price—  
only \$5.00 per spindle or \$450.00 minimum per frame  
Small service charge on first installation and installation is so simple your own electrician and mechanic can equip remaining frames  
Practically no maintenance cost  
Substantial savings on mangrels, aprons, etc.  
12-volt operation  
No extra floor space required

*Write for Full Particulars*

**ADAMS, INC.**

Wilkesboro Road Telephone 3261  
TAYLORSVILLE, N. C.

"As Much Again for Half as Much as Any Roving Stop Motion on the Market!"

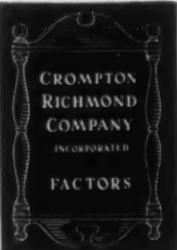
This patented ring retains grease much longer

**DIAMOND FINISH "MULTIPLE GROOVE"**

The supply of grease this ring holds will usually last for several doffs. Evenness of distribution is a big feature. Extensively used for cotton and synthetics twisting — it is an all-out favorite for plying and cabling tire cords.

**WHITINSVILLE (MASS.)**  
**SPINNING**   
*Makers of Spinning and Twister Rings since 1873*

Southern Representative: W. K. SHIRLEY, 25 Oak St., Belmont, N. C.



*The Human Factor*

**Cash Without Recourse**

To collect your receivables as fast as you bill them, and to know that the money is yours without recourse, is an important psychological plus in the conduct of any business.

That is the way Crompton Factoring works for its Southern accounts. It is an economical service since all collection chores are out of your hands and your obligation for the money ceases as soon as you receive it. Your capital turns over that more often and enables you to produce and ship so much more. It enables you to work that more efficiently because you know that your business belongs to you since there is no contingent loan liability.

Representatives:

L. N. HUFFSTETLER, Box 605, Gastonia, N. C. • VON D. OEHMIG, Green Island Hills, Columbus, Ga.

**CROMPTON - RICHMOND CO., INC.**

1071 Avenue of the Americas, New York 18, N. Y.

SERVING THE TEXTILE INDUSTRY SINCE 1899

- Yarn Tubes
- Cloth Tubes
- Loom Tubes
- Ball Warp Cores
- Pencil Tubes
- Thread Bobbins
- Underclearer Covers
- Tie-in Tubes
- Roving Tubes
- Topping Roll Covers
- Loom Beam Repair Tubes
- Cheese Cores
- Twister Tubes
- Narrow Fabric Tubes

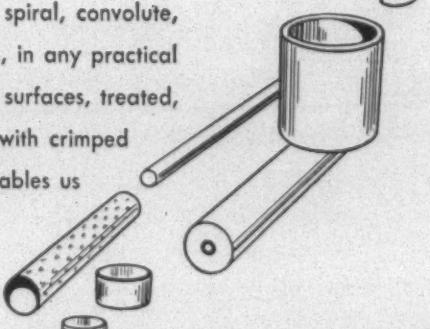


# SONOCO TUBES

Precision  
Paper  
Products

*For Every Textile Need...*

Sonoco's vast tube manufacturing facilities produce spiral, convolute, parallel or drawn tubes in sizes from  $\frac{1}{8}$ " to 36" I.D., in any practical length or wall thickness. Available in colors, various surfaces, treated, impregnated, perforated, scored, notched, printed, with crimped or burnished ends. Our 50 years' experience enables us to help you with any problem that can be solved with a paper tube.



**Sonoco Products Company**

MAIN OFFICE—HARTSVILLE, S. C.  
MYSTIC, CONN. LOS ANGELES, CAL. BRANTFORD, ONT.  
PHILADELPHIA, PA. GARWOOD, N. J. LOWELL, MASS. GRANBY, QUE.

**DEPENDABLE SOURCE OF SUPPLY**

## *Opening, Picking, Carding & Spinning*

# Importance Of Fiber Characteristics In Processing The New Staples

By D. M. THORNTON, Manager of Customer Service (Staple)

Textile Fibers Department, E. I. du Pont de Nemours & Co. Inc.

EVEN though Du Pont produces five fibers, let us confine our attention to three synthetics—nylon, Orlon acrylic fiber, and Dacron polyester fiber. Fundamentally, these products are new "building blocks" which promise to broaden and improve the range of products which you can offer to your customers. We are concerned primarily with the handling of these staple fibers in your mills with their existing substantial investments in equipment. Primarily, this equipment is the result of years of research in methods for converting natural staple fibers into spun yarns and end products.

In our constant attempts to lower the cost of processing synthetic staples, while at the same time improving on the quality of our products, a concept of the importance of fiber characteristics in the solution of mill problems has been developed which we think would be of interest.

In considering the development of a staple process for synthetic fibers, the standards established for natural fibers should not be accepted without question. The physical characteristics of each synthetic fiber can give valuable leads in simplifying the problems facing a mill man. It is these individual characteristics and the way in which they can be used to simplify your problems, that I wish to discuss.

Consider first the accompanying chart listing some of the fiber characteristics which we believe to be important in staple processing. First, let's define the properties listed. In each case, we are comparing these fibers with each other,

rather than with some other fiber or some arbitrary standard.

*Tenacity and Abrasion Resistance*—The strength and abrasion resistance characteristics of a fiber are important because, taken together, they indicate fiber "toughness." In large measure, they determine the amount of handling or working which can be done on a fiber without damage. In end products, "toughness" leads to lighter weight with greater durability.

*Crimp*—The crimp level in our three synthetic fibers is adjusted in the manufacturing operations to give what experience has shown to be the best balance between processability on your equipment and desired end-use characteristics. Crimp is an important factor in controlling mass cohesion as well as opening and drafting characteristics, which in turn largely determine the machine settings which should be used for optimum processing. The control of crimp allows you to maintain standard processing conditions in your operations.

*Crimp Retention*—We can define crimp retention as the ability of a fiber to maintain the crimp which was originally imparted by the producer. This characteristic affects processing tensions, twist levels in roving and in spun yarn, as well as the loft of end products.

*Resistance to Permanent Stretch*—A fiber which has a high crimp retention or which recovers completely after slight amounts of stretching is characterized as having a

### RELATIVE FIBER CHARACTERISTICS

	Dacron*	Nylon	Orlon*
Tenacity .....	High	High	Low
Abrasion resistance .....	High	High	Medium
Crimp .....	Medium	High	Medium
Crimp retention .....	Medium	High	Low
Resistance to permanent stretch .....	Medium	High	Low
Bulk .....	High	Medium	High
Fiber-to-fiber friction .....	High	Medium	High
Mass cohesion .....	Medium	High	Low
Tensile modulus at elevated temperatures .....	Medium	High	Low

\*Reg. trade mark

## OPENING, PICKING, CARDING & SPINNING

high resistance to permanent stretch. Some fibers, like nylon, stretch easily but recover well. Some others are more difficult to stretch, but once stretched do not recover as quickly or as completely, thus having what we call a low resistance to permanent stretch. Any stretching of these fibers in processing tends to be recoverable later as shrinkage during dyeing and finishing operations.

**Bulk**—Here we refer to the loft of a fiber as it shows up in processing, rather than the relative bulk which can be calculated from specific gravity measurements. It is that combination of properties that makes a sliver of a given weight occupy more volume than a similar weight sliver of another fiber having less bulk. Bulk or loft need to be taken into account in establishing machine settings, feed rates, sliver weights, trumpet sizes, etc.

**Fiber-to-Fiber Friction**—Here we are speaking of the relative ease with which fibers move across each other under tension, exclusive of the effect of crimp. The friction characteristics of a fiber serve as a guide in determining optimum drafting conditions.

**Mass Cohesion**—Mass cohesion is defined as the tendency of fibers to cling together as seen in all processes up to the addition of twist. It includes the effect of crimp. Mass cohesion largely determines the amount of opening required by a fiber as well as the amount of working needed to parallelize fibers.

**Modulus at Elevated Temperatures**—Here we are referring to tensile, torsional and bending moduli. All three of these fibers are thermoplastic, their properties changing with changes in temperature. The ability to crimp-set nylon or to set pleats which are relatively permanent to moisture in fabrics of Dacron polyester fiber or Orlon acrylic fiber are the result of this characteristic. However, this change in properties with change in temperature must be taken into consideration in handling the fiber at elevated temperatures.

Let's turn now to some examples which will illustrate the use of these properties in establishing a fiber-to-yarn process. At the risk of over-simplification, we have chosen to confine the principles developed here to worsted processing; however, these same principles apply equally to other systems of yarn preparation.

In the conditioning of stock preparatory to processing, it has been found that the high bulk of Dacron and Orlon makes it unnecessary to open the bales prior to their use, provided, of course, that they have not been stored for long periods in an unconditioned area. On the other hand, for nylon, the high mass cohesion, high crimp, and high crimp retention, plus the fact that nylon tends to open itself when unbaled, make desirable a 24-48-hour blossoming of nylon stock prior to putting it into work. Doing so permits less working and hence less fiber damage and nep formation in later processing steps. Blending of bales prior to processing results in even greater uniformity of your final product and is to be recommended wherever possible.

### Carding

As you know, the objectives of the carding operation for synthetics are: (1) to straighten and separate fibers; (2) to blend and distribute fibers uniformly; and (3) to pro-

## CARDING

### Nylon

More opening required at Bramwell feed  
Close settings  
More working and stripping action required  
Fancy desirable

### Orlon\*

Minimum opening at Bramwell feed  
Open settings  
Little worker and stripper action required  
Fancy optional

### Dacron\*

Moderate opening at Bramwell feed  
More open settings  
Moderate working and stripping action  
Fancy may be used

\*Reg. trade mark

duce a continuous end of fibers called a sliver for further parallelization.

In order to take full advantage of the fiber properties which make uniform, high-quality yarns possible, synthetics demand carding equipment that is in top mechanical condition. The uniformity of the staple as manufactured with the absence of foreign material, readily allows the maintenance of equipment in top mechanical condition.

Control of temperature and humidity is required to achieve maximum uniformity of operation through control of mass cohesion and fiber-to-fiber frictional characteristics.

In blending or mixing operations, wherever they occur, and wool is involved, separate oiling of the wool is a *must* for best processing performance and yarn quality.

The difference in dyeability of the various fibers makes it essential to clean cards thoroughly when changing from one fiber to another. In carding synthetics, as is the case with natural fibers, it is desirable to increase surface speeds gradually in order to eliminate abrupt changes and consequent fiber damage. However, there are some changes in settings required for each of the synthetics because of differences in their physical properties.

The high mass cohesion of nylon along with its high crimp and crimp retention requires more carding action to separate the fibers. Fortunately, nylon's high-tenacity, abrasion resistance, and resistance to permanent stretch allow this without permanent damage to the fiber.

On the other hand, Orlon acrylic fiber, with its low mass cohesion, medium crimp, and low crimp retention, requires a minimum of working in carding. Dacron polyester fiber falls in between these two extremes as would be inferred from its properties. A uniform feed, through the spiked vertical lattice apron is required and is achieved by variations in apron speed and action of the oscillating beater comb, settings for which vary with the bulk and mass cohesion of the fiber involved. Proper selection of these settings is necessary in order to control the degree of opening of the stock and maintain a constant feed rate. In general, the

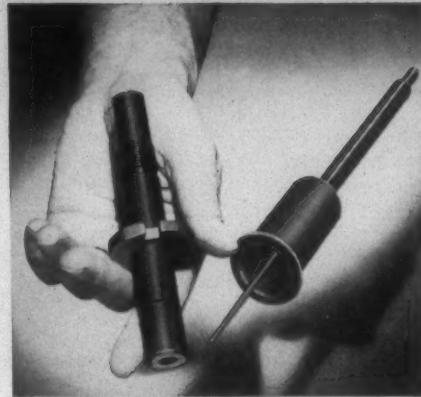
**Now you can  
be sure of**

## **CLEANER YARN...**

**one of many  
advantages of this new uptwister spindle**



**FLEXIBLE LOWER BLADE** cuts down vibration . . . reduces bearing loads . . . lengthens spindle life . . . lowers power consumption. Uniflex Roller Bearing Spindles are standard equipment on all new Unirail Uptwisters.



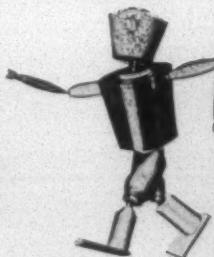
**UNIFLEX SPINDLES** have no free oil. Therefore no oil spray can soil your yarn. Proof is shown by absence of oil drip when fully lubricated spindle is held upside down. Sealed felt pads, lubricated by injection only once a year, meter oil to the bearings through porous bronze bushings.

**Reduce your costs, too, with  
NEW UNIFLEX SPINDLES  
on your uptwisters**

**Lower Power Costs.** Because the Uniflex lower blade reduces bearing loads. Also, both upper and lower bearings are especially designed to cut power requirements, while a hardened steel ball takes the entire thrust load on a small area of contact . . . another power saving feature. Field tests to date indicate power savings of more than 15% over plain bearing spindles.

**Lower Maintenance Costs.** Because the Uniflex Spindle greatly reduces oiling and cleaning cycles and other attention. Less vibration means less heat and wear, for longer, trouble-free service life. Uniflex Roller Bearing Spindles not only assure a cleaner product but more economical production.

**WRITE FOR BULLETIN S1.** Get all the information about how Uniflex Spindles make uptwisters produce more and better yarn at lower costs.



## **UNIVERSAL WINDING COMPANY**

P. O. Box 1605, Providence 1, R. I.

Boston, Philadelphia, Utica, Charlotte, Atlanta, Chicago, Los Angeles; Montreal, Hamilton, Canada; Manchester, England; Paris, France; Basle, Switzerland

Agents in every principal textile center throughout the world

Winding and Twisting Machinery for Natural and Synthetic Yarns

23.2.4

## OPENING, PICKING, CARDING & SPINNING

physical properties of all three fibers lend themselves to high quality carding performance.

Where crimp and crimp retention are on the high side, as for nylon, fancy rolls are generally required.

The high loft of Dacron and Orlon often makes necessary the production of a lighter-weight sliver than is the case with lower bulk fibers such as nylon, in order to permit passage through conventional coiler mechanisms.

Perhaps the most important point to stress in carding synthetics is the necessity for maintaining the most uniform and most accurate settings possible. Highest quality card sliver is dependent upon the accuracy of these settings.

The use of staple diagrams and sliver evenness tests are highly desirable in analyzing the quality of card sliver and achieving maximum yarn uniformity. The amount of fiber breakage or fiber elongation should be known for the carding conditions selected for each fiber and should be checked frequently by means of staple diagrams.

### Sliver-to-Top

The mechanical condition of equipment used for converting sliver to top is as important as was pointed out in the discussion on carding. This is equally true throughout all stages of processing. In considering the pinnings to be selected in gilling or pin reducing, an important principle is the use of finer pinnings in successive stages. In general, finer pinnings are used for synthetics than for natural fibers.

The minimum staple length found satisfactory for adequate pin control has been  $2\frac{1}{2}$  inches. For this reason, all three fibers now are available in three-inch as well as  $2\frac{1}{2}$  and  $4\frac{1}{2}$ -inch lengths. Orlon acrylic fiber requires use of the minimum number of gillings to produce the desired sliver weight due to its low crimp retention and the tendency to lose crimp in working. All three fibers require the addition of antistatic and lubricating finishes after stock or top dyeing to provide adequate static protection and lubricity. It is essential that this be done separately where blends of fibers are involved, just as it is true that wool should be oiled separately in a synthetic-wool blend.

## SLIVER-TO-TOP

### Nylon

Finer range of pins  
Can use many ends of less bulky sliver in feed

### Orlon\*

Open ends in feed  
Coarse range of pins  
May require fewer ends in feed because of high bulk  
Increased trumpet sizes

### Dacron\*

Open ends in feed  
Coarse range of pins  
May require fewer ends in feed because of high bulk

\*Reg. trade mark

In considering each of the three fibers specifically, nylon is the toughest, has the highest crimp, crimp retention, and mass cohesion, and, therefore, requires the finest pinnings. On the other hand, it is preferable to employ coarser pinning with Orlon because of its low crimp retention, low mass cohesion, and less need for vigorous working of the fiber. Here again, Dacron polyester fiber falls in between these two, being closer to Orlon acrylic fiber because neither has a high resistance to permanent stretch. Slivers of these two fibers should be spread as widely as possible with the least compression on the sliver as fed to the pin reducer, in order to decrease the amount of working done on the fibers in the pinning zone.

The bulk of Dacron and Orlon in sliver form may require an increase in trumpet size, a reduced sliver weight, or a reduced number of slivers fed in, in order to compensate for this high bulk. Nylon generally has not required such changes. All commonly used systems of pin reducing have been used successfully to produce quality yarns from all three of these fibers.

There are two points that should be made in connection with combing. The first is that since these fibers do not felt and cover up defects such as neps, a cleaner, more uniform yarn is necessary for highest quality end products. Combing, therefore, is generally desirable for clear faced woven fabrics. The second point is that trade experience has indicated that French combing is more desirable than Noble combing. This is true since the objective in combing synthetics is to reduce nep levels only. For knitting yarns, combing is not generally required.

### Reducing and Roving

Since these synthetics are generally stronger than natural fibers, it is possible to achieve higher productivities in operations involving twist. Higher machine speeds with fewer ends down are the general rule.

The lowest practical tensions in reducing and roving

## REDUCING AND ROVING

### Dacron\*

Most open ratches without sacrificing control  
Low and uniform package density—for better delivery  
at spinning  
Easier to draft—moderate roll pressure

### Nylon

Close ratches  
Low and uniform package densities—to avoid crushing  
Harder to draft—more roll pressure

### Orlon\*

Most open ratches without sacrificing control  
Low and uniform package densities—to avoid stretching  
fibers  
Easier to draft—lower roll pressure

\*Reg. trade mark

are recommended for all three fibers. The high crimp recovery of nylon and the resultant tendency to crush bobbins or lose loft and the low crimp retention or ease of crimp removal for Orlon acrylic fiber, make this necessary.

Fiber finishes are hygroscopic and as such are affected by changes in relative humidity. Higher humidities tend to make finishes tacky and thus the fibers are harder to draft. This, in turn, affects the amount of twist required in reducing and roving steps. Any change in humidity in going from step-to-step is equivalent to a change in roving twist.

A consideration of ends down alone as the criterion of a good reducing and roving operation is no longer sufficient to characterize this process. Here the character and quality of the yarn largely is determined. The roving operation can affect significantly the leanness, elasticity, residual shrinkage, yarn evenness, and ultimate strength of the yarn. High roving twists, ratch settings that are too close, high drafts, and incorrect humidities can accentuate the effect of low or medium crimp retention in fibers (Orlon acrylic fiber, Dacron polyester fiber) to give sleazy yarns. High tensions can stretch fibers of low resistance to stretch (Orlon, Dacron) causing high residual shrinkage or can even break fibers of low tenacity to cause low ultimate yarn strengths. In other cases, high tensions in the drafting of fibers of medium to low resistance to permanent stretch (Dacron or Orlon) sometimes stretch individual fibers permanently, which results in yarn unevenness, cockled yarn, or high ends down.

High fiber-to-fiber friction as in Orlon acrylic fiber or high crimp retention as in nylon demands low roving twists for easy drafting and resultant maximum roving uniformity. The characteristics affecting the amount of roving twist necessary to maintain soft roving obviously are numerous.

Fibers of high crimp, high crimp retention, and high mass cohesion, such as nylon, may require additional pressure on roving rolls to avoid fiber slippage, which pressure is not required with lower crimp fibers such as Orlon. Usually the softest twist that can be used to unwind the roving package without fiber-to-fiber slippage is sufficient.

#### Spinning and Twisting

Higher strength fibers, particularly nylon and Dacron polyester fiber, can be spun at higher productivities than

## SPINNING AND TWISTING

*Orlon\*, Dacron\*, and Nylon*

Humidity control

Lowest practical roving twist

Most open ratches without sacrificing control

Lowest practical tensions

Softest practical packages

High productivity

\*Reg. trade mark

other fibers and at lower ends-down counts. All three fibers have been spun successfully on cap, ring, and flyer frames. Here again the mechanical condition of the frames is of prime importance in achieving maximum productivity and highest yarn quality.

Spinning and twisting should be carried out at the same relative humidity and temperature as the roving operation which should be maintained at a constant level to assure uniform drafting and hence uniform yarns.

Practically all of the fiber characteristics discussed in roving are of importance in spinning; however, good roving makes spinning far less critical. Fiber distortions which result from the spinning of rovings of excessive twist usually cannot be overcome by modifications to the spinning operation, but there are several helpful measures that one can try that may minimize the trouble. For the fibers of low or medium resistance to permanent stretch, such as Orlon acrylic fiber or Dacron polyester fiber, more open ratches, lower drafts, and lower humidities may be employed as a trouble shooting measure for a particular lot of high-twist roving. Because of nylon's high resistance to permanent stretch, individual fiber stretching is usually not a serious problem.

Depending upon the lubricating power of the fiber finish employed, tenacity and abrasion resistance are influential in selecting spinning speeds and traveler weights.

In all fibers, it is desirable to use soft packages in both spinning and twisting.

The foregoing material is abstracted from a paper delivered by Mr. Thornton to the textile engineering division of the American Society of Mechanical Engineers at its recent Boston, Mass., meeting.

## Northern North Carolina-Virginia Mill Men Compare Fiber Preparation Practices

A GROUP discussion of opening, picker and card room practices was held this Spring at Fieldale, Va., during the meeting of the Northern North Carolina-Virginia Division of the Southern Textile Association. Chairman of the discussion was B. J. Mallard, assistant superintendent of Highland Cotton Mills, High Point, N. C. An abstract of the discussion follows:

*G. R. Ward*, superintendent, Highland Cotton Mills: I should like to know what type of opening the various people in the room have. In our mill, we have the five blenders and then go through two Whitin down-strokes. We are making yarns from 8s to 60s. I should like to know what other people are doing, because we do not think that ours is ideal at all.

*Chairman Mallard*: A question has been asked about the blending lines, as to the types of beaters and the cleaning equipment used. One criterion is that you are not supposed to have two types

## OPENING, PICKING, CARDING & SPINNING

of cleaning equipment in tandem. Do you gentlemen have two down-strokes right together, or do you try to stagger them?

*Mr. A:* Is anyone running two Superior cleaners in tandem?

*Mr. B:* How about the Jet cleaner in tandem? You have to run it in tandem occasionally, I understand, because of the cleaning you have.

*Chairman Mallard:* Yes, that is true. On the other types of equipment, such as the Superior, they recommend not running it together.

*Chairman Mallard:* A question that might be asked on opening is if any of you are using a by-pass of any beaters. Do you by-pass various beaters, or do you run both mixes through the identical line? Is there any comment on that?

*Mr. D:* Has anybody had experience with those cleaners that go between the F-7 beater and the trunk there?

*Mr. E:* We have the equipment, and it has reduced the dust through the mill.

*Mr. D:* That is the same experience we have had.

*Chairman Mallard:* Does that replace any other cleaning in the line?

*Mr. D:* No, it just adds to it.

*Chairman Mallard:* Is that the blade type of beater or the porcupine?

*Mr. D:* Porcupine. It agitates it. It just pulls it through and shakes the dust out of it. There is no air on it at all.

*Mr. F:* I should like to give you the layout we have at our mill. We have in the opening room two hoppers that feed into a Lummus mixer. From that it goes into a Saco-Lowell bale-breaker hopper and from there goes into a biting hopper; from that into a Saco-Lowell vertical cleaner. From that it goes to a Whitin screen section and into the Whitin down-stroke cleaner; then through the down-stroke cleaner into another Saco-Lowell screen section and into the air section. We get a good blend and good cleaning. There may be some better methods than we have, but we have had pretty good results.

*Chairman Mallard:* What grade cotton?

*Mr. F:* One-third middling and two-thirds strict.

*Chairman Mallard:* What yarns?

*Mr. F:* 10s to 20s, carded.

*Chairman Mallard:* Has anyone any particular question he wants to ask on pickers?

*Mr. G:* We run a 14-ounce lap on our pickers on pneumatic lap control, and we are wondering what is the maximum amount you can get on a lap with the pneumatic lap-control. We are experimenting with it.

*Chairman Mallard:* The question is the maximum yardage that can be put on a lap with pneumatic control on the picker, 14-ounce lap.

*Mr. D:* We did run a 52-yard lap that way. We have now changed and are making a 55-yard lap. You can put more on, but you cannot handle the lap very well.

*Mr. G:* Do you have to make any changes on your picker to handle the higher yardage?

*Mr. D:* You have to change the knock-off gear.

*Chairman Mallard:* I have had experience with that Saco-Lowell picker, and we ran a 52-yard lap—14.5-ounce lap. We experimented with various lengths and at one time got up to 60 yards. We had no difficulty in handling but found there was less waste when we cut it down to the shorter lap. We found the 52-yard lap at 50-pound pressure handled better in various ways.

*Mr. B:* We run a 63-yard lap on 14.5 ounces at our mill. I think it runs around 50 pounds. We had it up to 67, but it made too much waste.

*Mr. C:* Has anyone had any experience with the Saco-Lowell revolving grid beaters, the fringe roll?

*Mr. D:* We have them. They do a very good job. We have them on just the front beater section.

*Mr. F:* What is the general practice with respect to beaters? Are most of the mills now running two beaters or three in picking?

*Mr. I:* I have to qualify my answer. We run three on cotton and cut down to two for synthetics.

*Chairman Mallard:* I have to qualify mine, too. On carded we are running three and on combed two.

*Mr. J:* It varies according to the mill. On some types of stock we run three; on other types we run two.

*Mr. F:* Is it a general practice to have the picker fan speed about the same speed as the beaters?

*Mr. I:* On synthetics, a little higher.

*Mr. F:* Ours is about 900 now, on the Kirschner beater.

*Chairman Mallard:* Is anybody running a fan speed of over 1,000?

*Mr. I:* On synthetics 1,400.

*Chairman Mallard:* While we are on speeds, has anyone any questions on beater speeds? What are the general beater speeds? Is anybody running the beater at 1,000 or in excess of 1,000? Is anybody down in the low range, 500 or 600?

*Mr. L:* Doesn't that vary according to the staple? If you have short, dirty cotton it will stand a little more beating and probably needs a little more beating. If you get into longer staple the fiber will not stand it. We run about 1,150 on one-inch cotton.

*Mr. F:* I should like to ask a question about the method of feeding card sliver into the mix. How is that generally done? How do you break up the card sliver when you feed it back into the trunk line? Is that mostly done in the opening room, or do you feed it back into the picker line?

*Mr. M:* We have a special waste hopper in our opening line and feed it in there.

*Mr. C:* We have a beater section set up in the picker room, with a Kirschner beater, and it feeds from there into the condenser and to the picker.

*Chairman Mallard:* In other words, you run the sliver through the separate beating section, and it feeds from there into the condenser.

*Mr. L:* We have a slow beater speed on the hopper. We run only the sliver through.

*Chairman Mallard:* There is one question on pickers I should like to ask personally and ask for a show of hands. That is as to the control of lap waste by dead weight or by the moisture-regain indicator. How many are using the moisture-regain indicator in the picker room? (About eight.) I presume the rest of you are using the dead-weight method. Does that have any effect on your yarn size or roving size?

*Mr. N:* We can tell you how much changing we had to do after putting that in, to keep the numbers. We used to change about every half-day and now change about once in six months.

*Chairman Mallard:* What type of regain indicator are you using?

*Mr. N:* Aldrich.

*Mr. L:* We have used the Aldrich for a good many years and have been running a good many weeks without any changes at all. We think it very successful. I personally think there are far too many changes. I think that if today the sizing is too heavy if you will leave it alone tomorrow it will be all right. It all goes back, I think, to the blending. If you have good blending, even if you have a wide variation of raw material you will get good drafting.

*Chairman Mallard:* Did you get any increase in your reject laps?

*Mr. N:* We did not have over three a day once we got a good start on it.

*Mr. J:* How many people are using Micronaires as the basis for blending and mixing?

*Chairman Mallard:* We are using it, and so far it seems to be giving good results in trying to keep our blend within a given fineness range. What is the range, Mr. O?

*Mr. O:* Four inches for each individual cotton.

*Question:* If you are using cotton that ranges from 3.8 to 5.0, would you blend on a basis of 3.8 to 4.1?

*Mr. O:* We use a code. If we get in a lot of cotton we mark each bale, and when we blend we put in a certain number of each one. We try to keep the average fineness about the same.

*Mr. L:* I should like to know about how many bales will make a good mix. Personally I have always felt that in a good mix you should have plenty of bales. I think about 50 is the proper number. I think if you blend from 40, say, you get a variation from different types of cotton. In the old days, of course, we used to have to go by main strength and awkwardness and had to use a vast number of bales. With the Micronaire I think you can control it with a smaller number of bales. You know the management is always getting after us for using too much floor space.

*Chairman Mallard:* We are using 21.

*Mr. L:* We are using 22.

*Mr. P:* I have a friend in Georgia who has done some rather extensive checking, and he found that after 30 you do not get any particular advantage out of it. He went up as high as 100 bales.

*Mr. C:* I should like to know what the experience has been,

from the standpoint of neps, in using irrigated cotton, and particularly the Arizona variety, in comparison with rain-grown cotton. What I want to know is whether there is an increase of neps in irrigated cotton or not.

Mr. P: With irrigated cotton there is an increase.

Mr. C: Do you correct that by reducing the card speed?

Mr. P: Our experience is that if you cut down the speed of your beaters and pickers and do no more cleaning than you have to do you will reduce the number of neps.

Chairman Mallard: I think that is axiomatic, that the less machining and lower speed you have the fewer neps you will have.

Mr. Q: I want to ask the question if there is anyone using humidity in the opening room and the picking room, if you are using humidity on the cotton before it hits the card.

Mr. B: We are using humidity, about 40 per cent.

Mr. G: We are using around 50 for cotton in the opening room.

Chairman Mallard: From my experience, we did not seem to have to change drafts quite as much in the card room when using humidity.

Mr. L: I saw one mill running 65. They had the worst cotton I ever saw—all tangled up. I asked them why they ran the humidity that high; and they said: "Well, sometimes it gets that high, so we thought we would keep it up there all the time."

Chairman Mallard: I have seen a mill where they had the humidity control connected up outside, and when the outside air was damp the humidity was shut down in the mill.

Mr. M: If you pick up weight in the lap, when it gets through to the slasher, aren't you short some in weight? You are going to lose that humidity.

Chairman Mallard: Yes, you would be, but you can always put it back in the slasher.

Mr. L: How many mills are using static oil in the picker room or in the opening?

Mr. B: We use oil in the picker room. We use 0.2 per cent.

Mr. C: You do not get any loading on the cards with 0.4 per cent?

Mr. A: No. We have been using it four months.

Chairman Mallard: Let's try to get to the carding now, before our time runs out.

Mr. F: How many are using 14-inch cans on the cards?

Mr. A: We are using them.

Chairman Mallard: Are you going past the carding? Do you have any 14-inch cans on the drawing?

Mr. A: Yes, in the creel on the breaker drawing.

Chairman Mallard: Have you found it satisfactory to use them?

Mr. A: Yes.

Mr. F: How long do you run between doffs on that; do you remember? What is your doffing time on your cards?

Mr. A: One hour and 40 minutes, I believe.

Chairman Mallard: We experimented with one and found that we were getting a little over 40 per cent more stock in the can over the 12-inch can, and the doffing time increased by approximately the same percentage.

Mr. C: What is your number of pounds per hour on a 68-grain sliver?

Chairman Mallard: We run 68-grain on drawing. We are running 56 in one mill and 54 in the other on the cards.

Mr. P: Is it your experience that you lose control?

Chairman Mallard: Yes; it is not altogether satisfactory, but production has forced it. We are trying to get away from it but cannot.

Mr. S: What pounds per hour do you card?

Chairman Mallard: Seven pounds per hour. We figure 95 per cent efficiency for the card room as a whole, with five per cent down time for grinding and so forth.

Mr. G: Does anybody practice trying to maintain a definite humidity in the card room over the week-end?

Mr. L: I have tried it in years past, cutting it down about ten per cent from the operating relative humidity. It works very well. In other words, from 50 per cent we cut it down to 40, and it did very well. I have found, too, in recent years that it is beneficial to keep it a little warmer over the week-end. We used to cut it down to about 70 and had trouble with starting up. This past year we have kept it up to 80, or a little higher than normal operating temperature, and it starts up much better.

Mr. M: If you keep the air over the card moist you will not take out as many card strips as you do without it, will you?

Chairman Mallard: I think that is true, I have a question on

three-point grinding against two-point. That is grinding the cylinder, doffer and flats and setting the card all over or grinding the cylinder and flats and partial setting. I should like to have a show of hands on three-point grinding; that is, grinding the card all over and setting the card completely over.

Mr. T: We grind three-point and set the flats and doffer one time and set the rest of the card the next time.

Mr. U: How many cards is the grinder grinding in eight hours?

Chairman Mallard: Let's have a show of hands on that. How many have the grinder grinding on three cards in an eight-hour shift? Four. How many on two? Six.

Mr. A: How many cards does the grinder take care of when he is grinding two cards a day?

A Member: 40 cards.

Chairman Mallard: Anybody else?

A Member: 63.

Mr. ZZ: We have 99.

A Member: 101.

Chairman Mallard: There is quite a variation. Are you putting up a card and taking one down in the line or reducing the grinding time or stopping off cards? Or what is the grinding time?

A Member: About five hours.

Chairman Mallard: Does anybody have a shorter grinding time than five hours? That is the actual time the rolls are on grinding. I am rather of the opinion that we grind a little bit too long. I think we can cut down a little bit on grinding time and still get some sharpness on the cards. Their opinion on grinding cards is that you should set it one time and never touch it again unless you are grinding for the purpose of new clothing or in case of damage to the clothing, in which case you have to go ahead and grind it out. I think you should set the roll one time and then leave it.

Mr. F: I should like to ask a question. When your mill is running three shifts do you grind on the third shift just the same as you do on the first and second?

A Member: We do.

Another Member: We do.

Chairman Mallard: I always have had grinding on all three shifts, but cut down on the third shift and do not do as much grinding and give the grinder other duties.

Mr. L: Have you ever observed that for the first hour very little grinding is done? It is just fanning the air.

Chairman Mallard: In our mill we do move the rolls. Of course, I think your grinding cycle would have a lot to do with that. If you wait longer between grindings you have to grind more. Personally, I prefer a light grinding roll to a heavy set. If you set heavy you have a little red spark coming out there. If you grind a little longer and don't set it too close you will have a little more life to your cards.

Mr. T: I want to ask a question. What is the grinding time for a card with a continuous stripper?

Mr. S: Day-after-day grinding. You get it sharp but get it dull again right away.

Chairman Mallard: It does require more grinding with the continuous stripper. At the time we took ours off we increased the grinding cycle.

Mr. D: Has anybody kept a record on the life of the cylinder fillets?

Chairman Mallard: I was in a place that did. In our card room the average life of the fillet on the cylinder was approximately 12 years.

A Member: Ours was anywhere from ten to 14. I would say the average was 12.

A Member: Ours was about ten to 12.

Mr. S: How fast were the cards running?

Chairman Mallard: I would say from six to eight pounds per hour at the time I was there.

Mr. F: I should like to go back to the picker room and the blending reserve. I wonder if there is general trouble with the ball bearings on the bins in the blending reserve.

A Member: We have them but have had no trouble.

Mr. I: We have had a little trouble with the beater in the blending reserve.

Mr. F: That is the one I am talking about.

Chairman Mallard: What type of trouble? Lap-ups on the roll?

Mr. F: Yes, that is what I mean.

Chairman Mallard: The picker hand is allowing it to lap up. It takes pretty close cleaning to prevent that.

## *Warp Preparation & Weaving*

# An Engineering Approach To Blending

By ARTHUR M. SPIRO, Assistant Vice-President, Robbins Mills Inc.

THE chemical fiber picture is changing so rapidly, as we all know, that we have to deal with a much more general approach to our problem than the qualities of an individual fiber or fabric. The very complex problem relates to "How to make the best fabrics for a particular end-use." That sentence alone could call for endless hours of discussion of definition and if there were a single answer, there would be many textile technologists looking for other fields of employment. Needless to say, I do not have the answer to the problem nor do I believe that it is one which any of us can expect to see forthcoming in the way of a specific formula for some time to come.

The subject of my discussion takes me back too many years ago to one of the courses offered in the undergraduate chemical engineering college curriculum known as "chemistry of engineering materials." The objective was to provide information on the properties of a variety of engineering materials, ranging from alloy steels through glass, paints, plastics, resins, adhesives and others. As a further definition, we understood engineering materials to be those products employed in the various phases of building construction and equipment, and machinery construction and its operation so that these materials might be used more intelligently and, therefore, to better advantage. These chemical engineering materials were in a sense, almost all varying blends of elements and compounds and presented no less of a problem to the end-uses of the chemical engineer than the various textile fibers do to the textile technologist. The types of alloy steels selected by the chemical engineer for designing cutlery knives, grinders and crushers and tank cars differed as greatly in blends as do the types of fabrics which we might select for men's Summer suits, work uniforms and chemical workers clothing.

As a member of the textile fraternity, however, I am somewhat ashamed of the manner in which we select our blends for certain end-uses as compared to the principles that guide our friends in the chemical engineering profession.

Of course, we textile technologists must concern ourselves with the aesthetic qualities of our products to a greater extent than does the chemical engineer. These qualities such as style, color, pattern, hand, etc., must always remain an expression of the individual creation of the technologist or designer as dictated by consumer demand, and they can never be charted graphically or interpreted by means of a formula. They are as much a part of our industry's expression as the strokes of the painter, the vocabulary of the writer, or the notes of the musician. This is the talent of fabric development for which there will always be a premium opportunity offered in our industry.

Performance of fabrics, however, is a phase of fabric development and textile technology in which we can all take a lesson from the approach of the chemical engineer to the problems which confront him. I think that we will all agree that the performance factor of textile products is playing an ever increasingly important role in the field of fabric development.

The consumer, without whom we cannot exist, has until recently been concerned in general with aesthetic qualities of fabrics. Now he sees and hears all kinds of claims for performance factors and it is our obligation as an industry to see to it that he is not duped if we expect to continue to sell him our products based to some degree on performance. Frankly, we have little choice in the matter, because unless the consumer is interested in the performance factor of textile products as well as the style factor, we can close many new chemical fiber plants and shut down a lot of manufacturing equipment. The prices of most of the new fiber and fabric products are presently too high to be competitive with the senior man-made fibers and the natural fibers unless we can offer the consumer that something extra in performance value.

The impact of new chemical fiber and fabric development has been so rapid that we have hardly had time to build a sound structure of development principles of performance. In general, I would say that under the circumstances, the industry has done a relatively good job to date in this respect although without discussing particular fabrics, I am certain that almost every one in this room is familiar with some products that have been sold under the guise of miracle fabrics, which have been misrepresented in performance claims to the consumer.

I would think at this time, we as an industry should look objectively at our approach through the eyes of the consumer and take stock of our position and standing. Where do we go from here as far as performance of textile products is concerned, and is there some way in which a group such as is represented here can make a collective contribution? I believe that to do so, we will have to classify our fibers as engineering materials and build performance characteristics of our products as does the chemical engineer. Furthermore, this information on performance characteristics and principles must become public property if it is to do the industry and the consumer any good.

How many of you, like myself, are called on every day to try and explain to customers the performance differences in similarly constructed Orlon-worsted versus Dacron-worsted blends? This simple analogy becomes more complex as we attempt to answer questions regarding differences between 100 per cent Dacron, versus blends of Dacron

and worsted and Dacron and rayon in varying percentages.

Place yourself in the position of the layman who reads the Spring menswear fashion insert section of the *New York Times* and sees five or six different full-page tropical suiting advertisements, on as many different blends of fibers and fabrics, all of which in general make similar outstanding performance claims. Of course, he is interested in the easy living value of some of these claims but he is undoubtedly confused as to where to make his choice. The chances are that he will buy a suit and consequently, enough garments, fabric and fiber will be sold and is being sold in the early stages of production to consider our program successful. The time is drawing very near, however, when we will reach a capacity of over one hundred million pounds of annual production of acrylic, polyester and other new type premium chemical fibers and with it must certainly come something more factual in performance claims than our present promotional and advertising efforts. Unless we as an industry unite our efforts in this respect, it is entirely possible that Mr. Consumer may get confused enough to begin a renaissance back to the senior man-made and natural fiber fabrics which are at least dependable enough to be sold largely on their aesthetic qualities without a lot of contradictory claims.

Let's get back for a minute to the chemical engineer and his approach to a problem, somewhat similar to ours. I note that Prof. Herbert Ball of Lowell Textile Institute upon recently receiving the Harold DeWitt Smith Memorial Medal, remarked that textile fibers and products are being accepted as engineering materials. My good friend and former teacher, Prof. Edward Schwarz of the Massachusetts Institute of Technology has advocated and fought for this recognition for some time as well. I am sure that the work being done by these men and others on Committee D-13 of A.S.T.M. will ultimately establish many principles for testing and measuring fiber and fabric characteristics that will give us an engineering approach to textile fabrication. One the other hand, I am just as certain that many of us who are concerned with the development and sale of textile products today are, knowingly or not, sabotaging this effort to some degree before its gets started. The exception seems to be the case, rather than the rule, but nevertheless we all know that there are too many fabrics being made which do not completely live up to all of the miraculous performance claims made for them.

I would say that the first solution to the problem would be a conscientious movement on the part of all of us concerned with the development, sale and manufacture of textile products to avoid superlative claims until we have thoroughly proven them to be true by actual wear-testing evaluations for sufficient time periods in the end-uses where the garments will be sold. "What is not said, never has to be un-said," in the words of a wise man.

Secondly, we have to accelerate the engineering approach to fiber blending in our present fabric development. We will be handicapped in so doing this on a practical basis today since much of the fundamental research work of committees such as D-13 of A.S.T.M. still remains to be done. In short, then, we will as an industry have to combine our production efforts during the same period while we are carrying on our research and development. Unfortunately, the engineering research should have come first and we will now have to pay the penalty for bringing in huge poundages of new chemical fibers and fabrics in pro-

duction, without having first settled on the final fiber and fabric characteristics. We will apparently continue to suffer in this respect as well, as evidenced by the recent modifications in the acrylics which may even change again in the not too distant future, for all we know today.

One of the largest yarn and fiber producers is conducting a program of analyzing yarn and fabric geometry by treating the subject from the same approach as the chemical engineer treats his problems.

In one series of tests, a variety of 100 per cent yarns and blends in 25 per cent increments were spun to a constant yarn diameter and twist. This resulted in a variable yarn count which could be plotted graphically as one of the co-ordinates against the percentage blend. Such a chart would give a visual interpretation of bulking factors. These same constant diameter yarns were then woven into a standard construction of each yarn after which we could get visual plottings of fabric weight or thickness versus percentage blend.

After weaving, the fabrics were submitted to tests for wrinkle recovery, crease retention of varying humidities, strength, abrasion resistance, static, pilling and glazing. All of these factors could be plotted visually on one axis of a graph against the varying percentage blend on the other. I am not going to attempt to present someone else's tests and figures but I think we should all become familiar with this important development for more reasons than one.

First of all, we all have a lot of this type of information in our own companies although I doubt that many of us have attempted to put it together in this manner. To know that it can be done and is being done by someone else, might encourage us all towards some effort in this direction as well.

Secondly, I believe that this information is going to be made public as it is completed and it should serve as the guiding principle for building fabric performance characteristics through the use of textile products as engineering materials.

There are no secrets with regard to the structural performance characteristics of chemical engineering materials, and textile products as engineering materials cannot exist on any other basis. Naturally, manufacturing processes have an important bearing on the materials produced and we do not expect textile producers to readily exchange and make this type of information publicly available any more than we expect to show each other our styles, patterns and other aesthetic features before our selling seasons open.

In speaking of performance of textile products as far as the consumer is concerned, it would undoubtedly be best if we could evaluate the final garment purchased, whether it be a blouse, suit or dress. This, however, complicates the problem too greatly and I am afraid that initially we, as a group, will have to confine our efforts and discussions to fabrics. Once we begin to approach and catalogue fabrics from this point of view, we may find a group of cutters who have enough vision and leadership to unite as a body and set up certain principles of garment manufacturing using our certified fabrics, such as selection of sewing thread, seam bindings and other finding, to assure the consumer complete product performance.

Let me illustrate for a moment some of the typical types of performance factors which I believe should be established as basic technological facts.

In the case of static, which can be most objectionable in

garments on low humidity days, it has been proven that the addition of 25 per cent of viscose rayon to 75 per cent Dacron results in static properties that are insignificantly different from 100 per cent rayon or 100 per cent wool while 100 per cent Dacron we know is a terrible static offender on dry cold days. Twenty-five per cent acetate, however, when added to 75 per cent Dacron results in a greater static build-up than 100 per cent Dacron. This by no means condemns acetate, but it is factual and if the technologist had a set of guiding charts that analyzed the static build-up of various blends he would be able to do a better job of engineering performance into year-round weight suitings with the new man-made fibers. Furthermore, the public acceptance and knowledge of these conditions may stimulate other thoughts in finishing operations to overcome the problems. In this particular case, we can say that it is fact that small percentages of viscose fiber aid greatly in overcoming the static problems involved with the hydroscopic fibers under low humidity conditions. This fact could be charted and graphically analyzed in more detail by plotting test results of static build-up against type of blend.

Another factor of a performance problem is pilling of some of the new chemical fiber fabrics. Here again it has been shown that the pilling tendencies of some of the new fibers can be reduced by blending and this too can be charted and analyzed graphically. Cataloguing this type of information does not only involve the possible problems of static, pilling and burning, but also the outstanding advantages of strength, abrasion resistance, wrinkle recovery and shape retention. As complex as this problem is, I maintain that it can be overcome successfully with co-operation. To do so, however, will require some type of central authority or location for pooling this technological information.

The National Cotton Council and Wool Bureau both have testing facilities and act as clearing houses of information for products made with those fibers. Recently we have seen the establishment of the Rayon Information Center to represent the rayon industry.

While I am not of the opinion that the textile industry should have a half a dozen or more conflicting groups

representing the different aspects of the many natural and chemical fibers, I strongly feel that here is a job that has to be done. It certainly is not to the interests of the cotton or wool groups to promote this type of new fiber performance approach to the degree necessary, so that the leadership must come from another direction which could conceivably be the Rayon Information Center.

Is it inconceivable that an organization such as the Rayon Information Center could have laboratory and staff facilities to function in this manner such as the Harris Laboratories in Washington does in the interests of the wool group? If basic information such as the work of the yarn producer we mentioned was turned over to this type of organization it would serve as an incentive for all of us to do the same. I know that in our company, we have hundreds of fabric development samples of new fiber cloths which are intended to be sold as performance fabrics. We have complete laboratory tests on these fabrics and I think that we would be willing to turn these tests and samples over to a collective body for analysis of performance features in an effort to combine and correlate all of this information into a set of guiding principles which would then be made public.

I would propose that after some time, we would then put some kind of approval stamp on fabrics which had been tested as to performance by this governing body. We can and always will be able to sell much fabric based purely on style, texture, etc., and we could continue to do so, even utilizing the new fibers in some cases, without making outstanding performance claims. If we do make these claims, however, I maintain that it would be to our best interests to have them approved by this governing body as to whatever standards are set up.

There are many complex phases to the picture we have discussed and the easiest way out would be to say "It can't be done." My purpose in speaking to you is to send up a trial balloon with the thought that the suggestion merits further discussion if we are agreed as to the problem at hand. If you feel that the problems discussed are as serious as I do, then I am certain that the American Association for Textile Technology can do something about it.

Mr. Spiro's paper was delivered at the June meeting of the American Association for Textile Technology in New York City.

## Here's What Some Superintendents Do About 'Looms On The Floor'

SHOP TALK about slashing and weaving procedures were featured in separate discussion groups who attended the Spring meeting of the Northern North Carolina-Virginia Division, Southern Textile Association. The slashing section led off with a discussion by J. Zonnenberg, textile chemist of W. A. Scholet's Chemische Fabrieken, N. V., Foxhol, the Netherlands, on the use of starches and starch derivatives in Europe. An abstract of Mr. Zonnenberg's remarks follows:

Ordinary or unmodified starches, such as wheat, corn, potato, tapioca and sago, are not satisfactory for textile purposes, so con-

siderable work has been done both in Europe and in America on the development of improved modifications of these starches. Some of these, including thin-boiling starches, dextrines and other cold-swelling starches have already displaced ordinary starch to a large extent in Europe. However, these, too, have disadvantages, which has prompted the development of a superior type of cold-swelling starch derivative, a starch ether.

There are four principal disadvantages to the use of an ordinary starch: slight stability of solution; difficulty of removal; shedding; and a brittle film, requiring the use of a softener. These difficulties are almost entirely overcome when a starch ether is used.

Ordinary starch is actually a mixture of two kinds of starches; alpha amylose, which is insoluble in water; and beta amylose,



## Always Uniform

Starch, as well as golf balls, requires precision control in every manufacturing step to maintain unvarying high quality.

That's why over the years Victor Mill Starch has become known far and wide as "The Weaver's Friend."

Victor provides better penetration, stronger warps, smoother surface, less shedding, fewer slashing problems. Rely on it . . . and the Keever man who serves you.



THE KEEVER STARCH CO. ★ GENERAL OFFICES ★ COLUMBUS 15, OHIO

Corn, wheat and other grain products for industry since 1898

which is soluble in water. Ordinary starches contain from three per cent to 30 per cent of alpha amylose. The alpha amylose molecule is an unbranched chain; its solution separates into a water phase and a solid phase in the process called retrogradation. The beta amylose molecule is a branched chain; it swells in water, rather than dissolving, and forms a stable suspension. Retrogradation is the cause of shedding and difficult removal. This process is almost wholly prevented by using a starch ether. The ether is believed to be effective in overcoming retrogradation by converting the unbranched molecules to branched molecules by the addition of ether groups.

Starch ethers are often used in Europe in a mixture with ordinary starch or with a thin-boiling or cold-swelling starch. The principal reason for using a starch ether is the ease of removal from the yarn; other advantages are: absence of congealing; flexible film; keeps yarn plastic longer; fills all spaces in the yarn; ease of preparation—highly soluble in hot or cold water; no "hard size" bars where the slasher is stopped; and no mold or bacteria growth.

The high humidity usual in American weave sheds may cause trouble when starch ethers are used in sizing. In Europe the highest relative humidity used in weaving is 75 per cent.

### Discussion

*Q.* What do you do in Europe to improve the penetration of dyed yarn in slashing?

*A.* Some add wetting-out agents, which doesn't help much. The use of thin-boiling starches helps some. In this case they should be mixed with ordinary starch; use about 30 per cent thin-boiling starch and cut down on the total. Another method is to use a mixture of thin-boiling starch, a cold-swelling starch, and a softener. A big improvement is obtained when a starch ether is used.

*Q.* Do you use gums, e.g., locust bean gum, for sizing in Europe?

*A.* Very little on the Continent, although they are used to some extent in England. During the war, Germany used cellulose derivatives of the CMC type exclusively, since all starches went for food.

*Q.* How do you prevent sticking to cylinders?

*A.* By adding an emulsified tallow or a soap. Since film strength goes down when these compounds are used, it is best to overcome sticking in some other way. One method used was to size the yarn and then run it through the compound. That method seems not to have been successful, although Mr. Zonnenberg considers the principle a good one. (A comment was made that sticking is worse with stainless steel cylinders than with copper.)

*Q.* When do you add the compound?

*A.* It is best to add it after the starch has been boiled.

*Q.* What is the cost of the starch ethers?

*A.* About twice that of ordinary starch on a per pound (of starch) basis. On the basis of amount used (yarn basis) the starch ethers are 30-35 per cent more. The starch ethers are about one-third as much as gelatin. In comparing with the cost of ordinary starch, however, other factors in cost must be considered: no compound is needed, lower relative humidity can be used in the weave room, no preservatives are needed; starch ethers are longer lasting, no enzymes are needed in desizing (the product is water-soluble), and a better fabric is produced.

*Q.* What per cent moisture is left in the yarn when sizing with starch ethers?

*A.* The same moisture as with ordinary starch—about seven per cent.

*Q.* What per cent size on the yarn do you recommend?

*A.* Cotton, seven to 12 per cent; viscose, five per cent; acetate eight per cent.

*Q.* What fluidity is the solution?

*A.* The fluidity of a ten per cent solution of Solvadex H-4 is 35. (Mr. Zonnenberg did not know what units the fluidity was expressed in.) Solvadex is a starch ether manufactured by Mr. Zonnenberg's company.

*Q.* What are your comments on pressure cooking and homogenizing?

*A.* Pressure cooking is being used increasingly in Europe. The advantage is a complete swelling of the starch. However, product variation is emphasized by pressure cooking. Viscosity is lower

than when the starch is boiled in the open. Homogenization also lowers viscosity. It is little used in Europe.

### Weaving

Leader of the weaving section was Landon Joslin, superintendent of weaving maintenance, Dan River Mills, Danville, Va. The various types of materials represented were cotton, rayon, nylon, Dacron, Orlon and wool. The various types of looms used in the various mills were: plain dobby looms, fancy C. & K. looms, jacquards, terry type looms, cam and head looms.

*Mr. Joslin:* A familiar expression many of us have heard and many use—"Looms on the floor." It is this expression that I would like to say a few words about. Looking into the situation, there are three conditions which contend to give that situation, namely (1) improper adjustment of parts; (2) the wear; and (3) obsolete looms.

To continue the discussion we will compare looms with automobiles, starting with the last point and working backwards. When the automobile becomes obsolete it won't give you as good service, won't go as fast and as a result a new car is purchased. The only thing you can possibly do is to replace with a new one. But in looms, the situation is different. They become obsolete because of the change in style, demands for different quality of material, special parts to be added, etc. The solution for that is a replacing of parts or purchasing new looms because of special adjustments and attachments.

The automobile engine wears out and can be replaced, paint peels, upholstery wears out, along with many other things when the automobile wears, which as a whole would be more expensive than buying a new one. If you want it to be in tip top condition, replacement is the only thing to do. Many things cause wear when it comes to looms, many little places and parts that get pretty badly worn, a new crankshaft, a new lever, a new pin. We can have parts replaced and looms overhauled for between \$300 and \$500, and you have an almost new loom.

We don't think of improper adjustment when we think of automobiles. We often have to take our cars to the garage to be adjusted, which keeps it running well and dependable. Taking that into looms, they may be running and doing fairly well, but are they making good cloth and are they making it dependably? When the looms are started up in the morning, should they run dependably or well? The main solution is to fix them; in other words, the best way which many have found out is to just keep your looms in good condition. The cost men know that you can weave cloth better on looms that are in good condition than you can on looms that are in poor condition. The one thing many don't know is that the supply cost of keeping the looms in good condition according to the experience we have had is one-third less than the supply cost of keeping looms in terrible condition; that is, by patching up and keeping them going. It has been proven over a period of three years at our mill that there is no justification and no excuse for "Having looms on the floor."

### Discussion

*Q.* Does Mill A still use the special maintenance system of fixing which we have heard so much about?

*A.* Specialized loom fixing as we have heard it is not used too much at present. They do have specialized maintenance in that they have certain men on programs which they call fender makers. They go up and down one alley only, looking for certain defects which they are supposed to watch out for.

*Q.* Are the responsibilities designated or do you have a flag man, too?

*A.* Yes, they have a flag man, too. We have six weave rooms.

*Q.* Would this specialty man have the entire weave room or just a certain section?

*A.* Possibly an entire weave room.

*Q.* How often would he check the battersies?

*A.* This depends on the different motions. Different weave rooms have different cycles.

*Q.* Were the weave rooms in such good shape before the flag men or project men were given this job?

*A.* Some flag men like this program very well; that is, the program now running at Mill A.

*Q.* Can you run as many looms with the same number of fixers?

*A.* For every 100 looms you want to have one man or whatever your particular condition might be. Some call them flag loom fixers, some maintenance men. The labor cost is about the same and by so doing, the control and running of the looms are much cheaper and better by having these flag men and maintenance men as they might be called.

*Q.* Who has some different type of set-up in your mill?

*A.* Most of those present have fixers on sections; that is, in general. Mill B used to have feeler men to check the feelers, pinion gears, etc., but haven't had this set-up for some time. Mill C uses the breakdown man to take over things of major importance as outlined by this job set-up. This breakdown man helps the fixer whenever he doesn't have a breakdown to be working on. Mill D has its own section men but have the breakdown men also, but the breakdown men do not help the section men at all.

*Q.* Is there too much difficulty to handling the project maintenance men?

*A.* It was hard at first, but any system has to be worked out at first whenever it is instigated. At Mill C, about every two weeks, the head fixer goes around and checks each fixer's job and writes down anything that he finds and leaves it for the fixer to fix. The causes are divided by the fixers on all three shifts. We have a head fixer who only fixes a major breakdown. The fixers also hang the warps.

*Q.* Are any loom fixers on an incentive basis?

*A.* Mills A, E and B.

*Q.* How do you tie in quality?

*A.* As the rolls are pulled into the inspection room, they are inspected and each fixer gets what was woven on his shift by the shift marks. All the seconds are charged to the fixer by shift marks. Each fixer gets the same because the cloth is doffed by fixers.

*Q.* Are the loom fixers moved according to change in fabrics?

*A.* The bedspread plant of Mill B does, the blanket plant of Mill B shifts them, but tries to keep the same assignments but because of change of orders, or lack of orders, they have to be moved.

*Q.* Have you run into any disadvantages of fixers being tied in with quality? Do your fixers have a tendency to produce regardless of quality?

*A.* The weaver is held responsible and they will see whether it is the fixer's fault or not. In one mill, the fixers get paid for quality or the only incentive the fixer gets is for quality. The weaver gets paid straight time, but the fixer gets what they call a quality bonus.

*Q.* Do any mills have any program of training weavers? What method do some mills use? Do you have any plan or program to make sure they are weaving properly?

*A.* Our learners, all new people, have a program of training for our way on production. A person who has never worked before, all about his background is studied and he is put with an instructor for several days; that is, a person who has never woven for us before. The person who is an instructor is only to instruct. A

person who has never been around the mills, we teach them how to weave by degrees until they can take over a set of looms. When the instructor is not instructing he is weaving some place in the mill.

*Q.* What about the problem of absenteeism which is a problem in most mills? Where you have to transfer a battery hand to weaving sometime, because of absenteeism, how do you handle this problem?

*A.* We have a program set up where the standards department gives allowances then to take the person over and train them as a weaver, transfer from battery hand to weaver and possibly back again. The weaver is paid an average rate if they have one, but no more. Mill C is taking two overseers off their jobs and putting them with each weaver in the mill, taking him in the office and talking to him about weaving, find out all he can about him, goes out on the job with them and works with them, possibly two to four hours to make sure they know how to take care of the looms. If they have been weaving 40 years, they, too, are to be taken aside as well as the new man and they think this will help the quality. Quality shows that most mills have plenty of weavers who don't know how to weave.

*Q.* How do you introduce this program to your weavers?

*A.* Each person is taken into the office and talked to. The assistant overseer does this and each shift is taken into consideration. The other assistants are to follow up on the trainer, as they are now called, and will take over and see that the weaver is following the procedure which has just been instituted.

*Q.* Mill A has been doing some things to further the quality program. When you have different types of looms, what do you do about the various types of these looms?

*A.* Mill C has only feeler type of looms and have all single change. The biggest training program is to teach the weaver to pick out the broken warp ends and this is a tough job. Mill B has fork and feeler and are in the process of changing over to either fork or feeler. The weaver is trained to begin with but we still have trouble getting the weaver to do this. It is hard also to follow up on this and get the weaver to do it but it is very important.

*Q.* Does anybody have a different type of magazine shuttle filler to which the blame is laid when the wrong filling is put into the magazine?

*A.* This is laid on the battery hand. The filling at each loom is of various colors and the filling is never taken out of this rack and the battery hand fills the magazine as she makes her rounds.

*Q.* Such things as pick spindles, how many times do you oil them?

*A.* In Mill F, once every 24 hours. The crankshaft or the most important parts are oiled once per shift. The less you run the more you have to oil these pick spindles. Mill F uses an oily cloth and wipes them plain.

*Q.* Do you stop any looms while blowing off?

*A.* Yes, we do just the one blown off. Maybe the loom stops a minute while wiping off. This has been tried on all shifts; maybe wipe on one shift, blow off on one shift. American cottons have to be blown off more often than the others because they are dirtier than the other looms.

# SO YOU WANT GOOD CLOTH!

By FRANK D. HERRING

## Part 42 — Selecting the Trainee

THIS article is written primarily for the benefit of the overseer of the weaving department and the weavers under his jurisdiction, but some of the statements contained herein can be applied and used in the departmental set up and organization of other departments throughout the entire plant. The first essential, and most important duties of a department head, or overseer, is to know the people under his jurisdiction, know them as individual persons.

In order to know people well and know how to approach them to obtain harmonious understanding and co-operation is to learn about their early lives and their present problems and ailments. After the overseer has learned these things about the employee it enables him to understand the individual traits and peculiarities of the employee. At this point the overseer should get the fact over to the employee, and make it stick, that he is really and honestly

## WARP PREPARATION & WEAVING

interested in the employees' problems, and is willing to help him in any way possible. When this is done the overseer will have opened up a two-way avenue of approach based on mutual interest and understanding between the two parties involved, and if the overseer will keep up friendly contact with the employee from time to time thereafter he will create and develop a pleasant working condition throughout his entire department.

Of course there are exceptions to this, because occasionally the overseer will have to deal with the chronic neurotic, trouble-making type of employee who is not willing to be satisfied with fair and just treatment, same as administered to other employees, but due to his exalted exaggerated opinion of himself he wants to be shown partiality and special favors. This type employee presents a real problem for the overseer, because he must be made to accept and respond to the same treatment given the other employees, or be eliminated from the organization. It is good policy for the overseer to avoid discharging an employee whenever it is possible to do so and still obtain the desired results. The overseer can usually avoid discharging the above mentioned type employee by telling him that he must adhere strictly to the rules and regulations same as the other employees. In this event the chronic employee will pretty soon eliminate himself by quitting. If this type employee is allowed to violate the rules and gain concessions from the overseer which the other employees are not given, the overseer will have created a condition in his department that will make it impossible for him to run his job at top efficiency because he will lose prestige and the confidence and respect of the other employees. And when these things are lost by the overseer they are never fully regained, because the employees will never forget or forgive actions by the overseer which they consider an infringement on their personal rights and privileges.

I have touched briefly on supervisory work, because the overseer should certainly talk to and learn all he can about the prospective trainee before he is put on to learn to weave, or to learn any other job. Of course the overseer should first determine if the prospective trainee really wants to learn to weave before he is put on to learn, because if he is not quite sure that he wants to weave it is a waste of time and money to try and teach him. After the overseer has learned that the prospect thinks he wants to learn to weave he should tell him just what running a stand of looms consists of, and the many things which he will be held responsible for. After this is done the prospect will change his mind sometimes and decide that he does not want to learn to weave, and of course this is the proper time for the overseer to learn that and forget the whole thing. Weaving, or running a stand of looms is a full-time job, because he must keep the looms running in order to maintain a reasonable production, and he must keep up constant inspection of the warps and looms while they are running in order to keep down seconds and stay ahead of his job. Too many weavers do not realize this fact. Some seem to think that if their looms are all running they are ahead of the job and have time to loaf around, but it is while the looms are running that seconds are made.

When possible, the weaver trainees should be selected from the employee group on the job who do not make as much money as the weavers, such as battery hands, filling

hauliers, oilers, sweepers, loom cleaners, etc. This is good business for a number of reasons, first, it will give this group of employees the added incentive to make good on their respective jobs in order to receive recognition from the overseer, and thereby promotion to a better job. The employee who does not appreciate commendation for a job well done is not worth his salt in any organization, and the overseer who is negligent in giving praise where it is deserved is overlooking one of his most important duties. Second, it gives the overseer the advantage of knowing the people he is promoting and building his organization with. He knows their all-around abilities, their work and attendance records, their attitudes towards other employees in the organization and their ability to work with them. This is vitally important, because the weavers' responsibilities are such that he is called upon to contact and work with a number of other people, viz; the overseer, second hands, head loom fixers, inspectors, warp men, smash hands, filling haulers, etc. All these employees are directly concerned with the weaver, and have their specific duties to perform in contribution to the aid of the weaver. In other words the weaver is the focal point of a team of employees who must work harmoniously together in order to make the stand of looms produce efficiently.

### Weaver Training

The system used in training weavers varies from mill to mill, but the system most commonly used is to put the weaver trainee with an experienced weaver, who is running a stand of looms, and allow him to remain there until he is capable of taking over a stand of looms for himself. This is a very expensive and not too effective way of training weavers, because if the weaver takes up very much time instructing the learner his stand of looms will fall short in quality production, and if the learner is allowed to just ramble and try to learn without some basic training he will make plenty of trouble for the weaver and the loom fixer by making seconds and getting looms out of fix.

If the mill is large enough to justify a continuous training program it is best to designate eight or ten looms to be used solely for training purposes. I suggest eight or ten looms for average conditions, but of course the proper number of looms for this purpose would be determined by the type fabrics being woven. A capable instructor should be put on these looms and held responsible for the quality and production from them, at the same time he can instruct and watch the learner. When a continuous program is not justified it is best to put the instructor on a few looms taken from a regular stand for training purposes. In this event the weaver, from whose stand the looms have been taken, should be paid for the output from them. The trainee should be taught the fundamentals of weaving before he is turned loose and allowed to start looms on his own. By using this system, the instructor can teach the trainee the fundamentals in a few days, wherein several weeks of hit-and-miss, trial-and-error efforts would be required if the trainee is turned loose on a stand of looms with a weaver to train him.

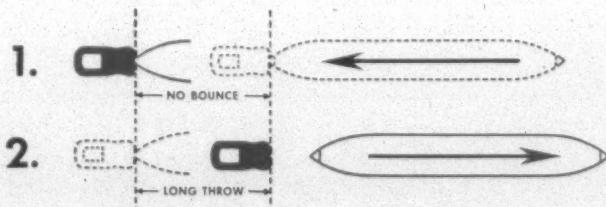
The fundamentals of weaving consist of the following, and the instructor should teach them one at a time, and in the order named. (1) How to stop and start a loom. (2) Matching the filling after it has broken in the shuttle. (3) To tie a weavers knot, correctly, and fast. (4) Draw in



## On... and off to a flying start!

Put on a G&K PICKMASTER® Leather Picker and your shuttle will speed across the race plate and come to a smooth even stop *without bouncing*. You'll get more life out of each shuttle. You'll get better weaving with less bang-off.

PICKMASTER Pickers are precision-made of Hairitan® leather, firm, sturdy and resilient . . . they absorb repeated impact without shuttle bounce . . . they dissipate heat, preventing hot spurs.



1. Stop-action photographs prove that the G&K Pickmaster Leather Picker catches the shuttle spur in its precision hole and sticks with it to the end of the lay. 2. A split second later it follows through with a long sweeping throw that drives the shuttle straight and true across the race plate.

G&K Pickers are made for all Draper and Crompton & Knowles Looms. They are just one of the many Orange Line Textile Leathers which are available through your local Distributor.

### FREE CATALOG

presents the complete Orange Line of Textile Leathers for weaving on Draper and Crompton & Knowles Looms—also Aprons and Tapes.



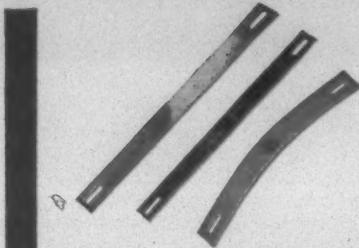
**MEMO: If your problem is power transmission,  
see your G&K Belting Distributor for:**

**HEART OAK** top grade oak tannage

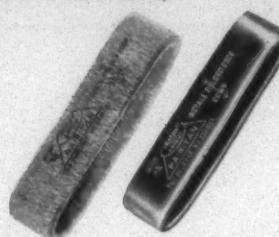
**RESEARCH®** premium quality special tannage

**SPARTAN®** combination tannage: resists moisture, fumes

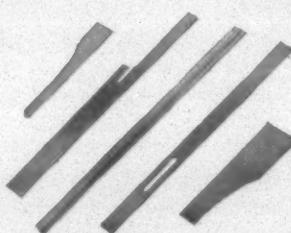
WRITE FOR FREE BELTING MANUAL 101



**Straight and Curved Check Straps** assure smooth shuttle throw, long life. Leather has high resiliency with low permanent stretch; straps are built to flex uniformly.



**Endless Check Straps** provide controlled cushioning action for the picker stick. They are positioned perfectly for each pick, and conform to the angle of the picker stick at all points.



**Boxmaster Binder and Box Plate Leathers** of special HAIRITAN® Leather with smooth, catch-free edges and deep, velvety surface. Need no waxes or fillers—do not bleed and discolor the filling yarn.

**G&K**

## Orange® Line Loom Leathers

1. STOP KINKY FILLING (No shuttle bounce)
2. REDUCE BANG-OFF (Perfect boxing)
3. CUT SHUTTLE COST (No hot spurs)
4. INCREASE PROFITS

**GRATON  
AND  
KNIGHT**

**GRATON & KNIGHT COMPANY**  
Established 1851  
Worcester 4, Mass.

**DIXIE**  
LEATHER CORPORATION

**DIXIE LEATHER CORPORATION**  
Graton & Knight Company Affiliate  
Albany, Georgia

the warp threads through the drop wires, harness and reed. (5) Checking the cloth on the looms for bad selvages, misdraws and threads out. (6) Walk the back alleys and check the warps while looms are running. (7) When to flag the loom for the loom fixer, and warp man.

After the instructor has taught the trainee how and why to do the above mentioned fundamentals, he should then allow the trainee to run the looms himself under the close supervision of the instructor. With a capable instructor and trainee this program should last a minimum of three and a maximum of four weeks, depending of course on the type fabrics being woven.

I have used both of the above mentioned systems in training weavers, and I have learned that by using an instructor on a few looms the trainee will learn more about running a stand of looms in three weeks than he would learn in three months by working with a weaver on a stand of looms. Of course, after the trainee has been put on a stand of looms he will continue to learn many helpful ways of taking advantage of his work and staying ahead of his job. These many things can only be attained by effort, time and practical on-the-job experience.

#### Running a Stand of Looms

A good overseer will insist on, and accept full responsibility for, the department under his jurisdiction. He should know the rules and policies of the company and adhere strictly to these policies, and he must have the authority to get things done in his department and the employees under his jurisdiction must well know this. However, a good overseer will realize at all times that he is only a human being and is not infallible, that he is not perfect, that he could be wrong, and at all times he should keep an open mind and be willing to learn and accept new ideas and better ways of doing things and getting others to do. He will invite suggestions on ways and means of doing things better, and will accept them after they are tried and proven, and he will give full credit whenever and to whom it belongs. This is co-operation, and departmental co-operation begins with the overseer in that department, because if he is not co-operative his employees cannot be. So, this all adds up to just one thing—the overseer or supervisor of a department in any organization is a key man because he is in contact and has authority over the people at the work level, and that is where production begins and ends.

A good overseer knows how to delegate authority and fix responsibility where it belongs. This being true, he should explain to every weaver and prospective weaver what their individual responsibilities are and just what is expected of them. If the weaver accepts the responsibilities explained by the overseer, he belongs on a stand of looms, if the weaver does not accept the responsibilities which go with his job, he does not belong on a stand of looms and the overseer will have to resort to other alternatives—put him on some other job, transfer him to another department, or eliminate him from the organization. This approach will leave no room for misunderstandings and hard feelings between himself and the employee involved.

The weaver, running a stand of looms, should be held responsible for the production and the quality of the cloth

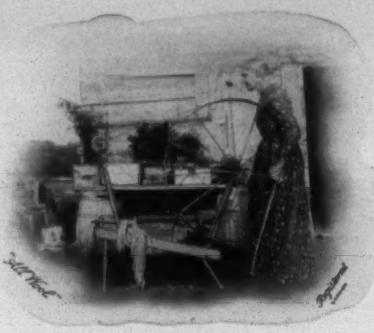
produced on his stand of looms. I do not mean to say that the weaver should be penalized in any way for seconds or loss of production caused by the looms being out of fix, and other causes beyond his control such as bad warps, bad filling, oil spots on cloth, bad work by smash hands, etc., provided that he reports these things to the second hand, overseer or other designated authorities and refuses to run the loom until the necessary corrections are made. After the weaver has reported these conditions it becomes the responsibility of the overseer, and he should have something done about it immediately.

The best of loom fixers will sometimes fail to fix a loom the first time he is called to work on it, and in this event the weaver should use a reasonable amount of patience and call the fixer back and explain to him just what the loom is doing or failing to do, but the weaver should not try and tell the fixer how to fix the loom, because this is the fixer's job and responsibility after he has been called to the loom, but in the event the fixer fails to fix the loom after being called back to it, the weaver should then report the condition to the proper authority. Some loom fixers resent being told by the weaver what a loom is doing or failing to do, much less being told how to fix it. This, of course, is the wrong attitude on the fixers part, and the overseer should talk to him and help him to fully realize the necessity of his and the weaver's working together in harmony and friendly co-operation, because this is to the mutual benefit of all.

Nobody should be allowed to flag a loom for the fixer except the weaver. It is all right of course for the overseer, second hand, head loom fixers or others designated to do the job to check over the cloth and the looms, but if a loom is found to need the attention of the fixer the inspector should show the weaver why the loom should be flagged for the fixer, and let the weaver flag the loom. This is good training for the weaver, and a big help to the fixer, because it enables the weaver to look for and detect these things and to flag the fixer before a lot of bad cloth is made. If the loom is allowed to run the final result could be a much bigger job, or a breakdown for the fixer. The weaver should be trained to look at the cloth on each loom he passes while walking the weaver's alley, in going from loom to loom which is stopped.

It is vitally important also that he walk the back alleys and check the warps while the looms are running. Too many weavers go with their heads up and see nothing but a loom stopped off. The loom that is stopped off is not making any seconds, but it is the looms that are running that need his attention in order to keep down seconds. The weaver should check the cloth on his stand of looms immediately before or after shift changing time to determine if the weaver on the other shifts are leaving the looms running with threads out, misdraws, looms out of fix, etc. It is good business for the weaver to do this, even though some of the looms are stopped off and need his attention, because it will help to keep his seconds down.

The above statement may not make sense to some readers right off hand, but it has been my experience that if the overseer can get the second hand, the fixers, the weavers, and other employees directly involved and contributing to the efficient running of the looms to become second conscious, and make every effort to keep seconds at a minimum, he will have little worry about production. As previously stated, running a stand of looms is a full-time job.



## KNOXALL

Roller Cloth  
Clearer Cloth  
Endless Clearers  
Plush

EDWARD H. BEST & CO.

EST. 1888 BOSTON, MASS. INC. 1901

ATLANTA, GA.  
W. C. HAMES

NEW YORK  
H. W. CURTIS

185 Pinecrest Ave., Decatur, Ga. 735 W. Crescent Ave., Allendale, N.J.  
Dearborn 5974 Allendale 1-3521

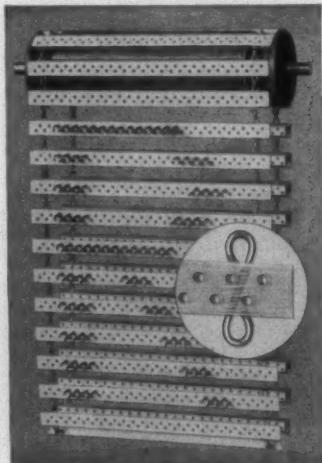
GREENVILLE, S.C.  
WILLIAM J. MOORE

P. O. Box 1970

Tel. 5-4820

## RICE IMPROVED DOBBY BARS

The improved bar with clear peg holes and eyes that will not twist. Made of thoroughly air dried stock.



Other Loom Supplies  
**HARRIS "HEAVY DUTY"**  
LUG STRAP  
PICK-ARM STRAPS  
"WIRECORE"  
LOOM CORD  
FIBRE AND LEATHER  
ADJUSTING STRAPS  
DOBBY PEGS  
SPECIAL BRAIDED  
LOOM CORDS

## RICE DOBBY CHAIN COMPANY

MILLBURY, MASSACHUSETTS

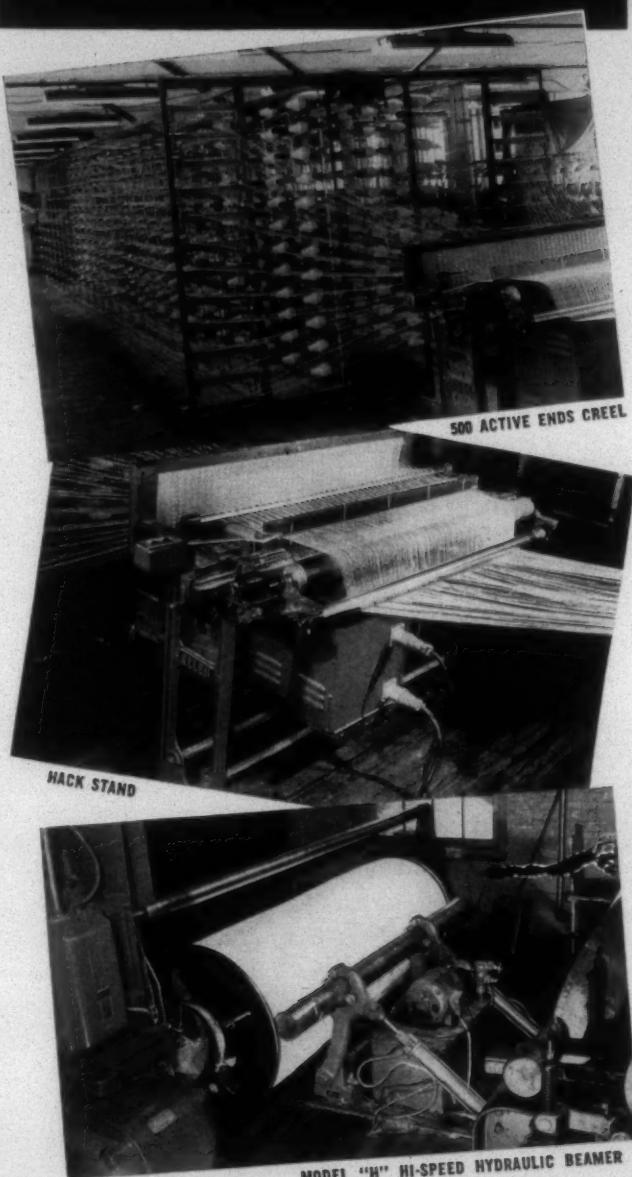
Southern Representatives

R. E. L. Holt, Jr. Associates

Jefferson Bldg. P. O. Box 1474 Greensboro, N.C.

## ALLEN HI-SPEED UNITS

### Can Increase Your Production

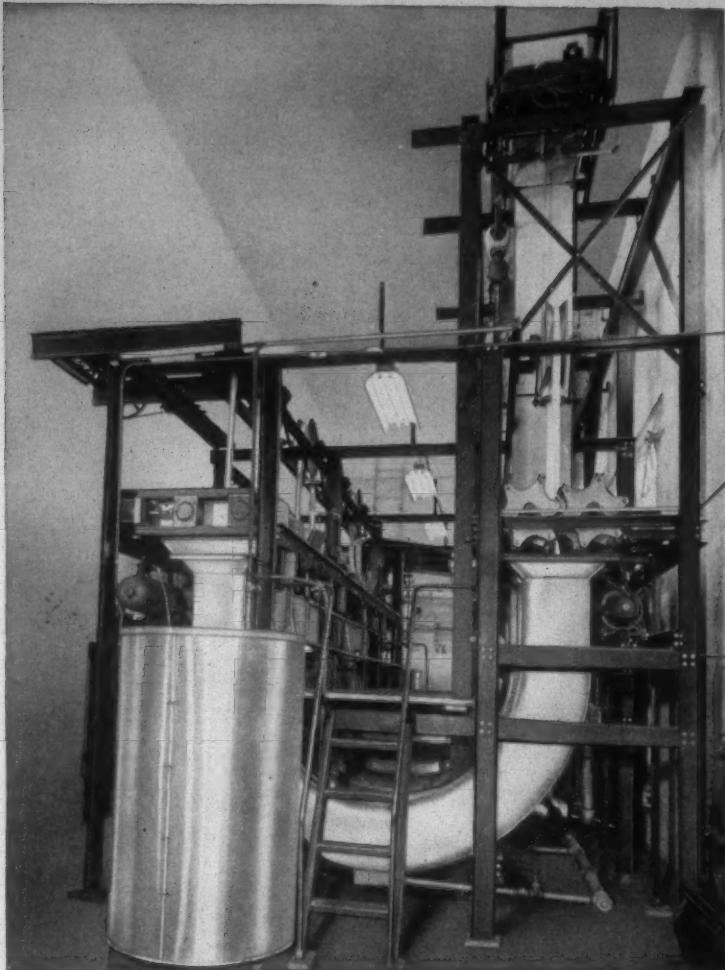


Allen Hi-Speed equipment, through its unlimited flexibility, licked the limited space problem at the North Billerica Co., North Billerica, Mass. One modern high speed woolen system unit has replaced several out-dated units, resulting in greater production and higher quality. Fewer operators now produce *quality warps of greater length in less time*. Call for an Allen engineer to analyze your warping and beaming set-up with an eye towards lowering costs and increasing production. Write for full particulars.

**Allen Warper** COMPANY

Successors to Wamesit Warper Co. 40 CHURCH STREET, LOWELL, MASSACHUSETTS

Manufacturers of Quality WARPERS • BEAMERS •  
BALLERS • COMBS • CREELS • TABLE WARPERS and all  
WARPING EQUIPMENT. Replacement parts for  
SACO-Lowell • ENTWISTLE and ALLEN WARPERS



2-stage Butterworth Junior  
Bleaching Unit at Kerriglen  
Finishing Co., Providence, R.I.

**40 x 16 foot**  
**Floor Space**  
**for High Quality**  
**Continuous Bleaching**

Here is a complete two-stage Butterworth Junior Bleaching Unit that requires a floor space only 40x16 feet.

Developed in conjunction with DuPont for small production bleaching. Ideal for the smaller plant or for specialty bleaching in larger plants. Rated production is 600 lbs./hr. for single stage, 1200 lbs./hr. for double stage — based on 5 yd./lb. muslin sheeting 50" wide.

The Junior range does a high quality bleaching job continuously and economically. Only one man is required to operate the unit. Cloth is handled gently and

efficiently with patented Butterworth tension control devices.

A complete Junior range for cotton knit goods or cotton piece goods includes Squeezers, Washers, Saturators, J-Boxes, motors, instruments and auxiliary equipment.

For full details, ask for Bulletin 200.

**H. W. BUTTERWORTH & SONS CO.**  
Bethayres, Pennsylvania

1211 Johnston Building, Charlotte, North Carolina  
187 Westminster Street, Providence, Rhode Island  
Machines for Bleaching, Boiling-Out, Dyeing, Mercerizing, Finishing & Embossing : : Pot Spinning Machines for Synthetic Fibers : : Calender Rolls : : Tenter Chains

**BUTTERWORTH**

## Bleaching, Dyeing & Finishing

# Promoting Level Dyeing Operations

By F. O. STONE - Part Five

THE value of chemical agents combined with mechanical devices has gradually brought about a continued improvement in promoting level dyeing operations over the past 20 years. The sulfonated castor and oleic (red) oils were the first type of chemically processed agents produced for use in the dyeing and finishing industry. The introduction of these sulfonated oils greatly improved the scouring and preparation of yarns and piece goods as the dyers were able to process goods in "hard" water supply where it was extremely difficult when they had only soaps and alkalies (caustic and potash) as processing assistants.

The development of specially processed chemical auxiliaries as well as the purification of waste by-products whereby they have been applied in dyeing and finishing has allowed continued improvement in quality of the finished material; these products are listed below as type group.

(1) *Preparation (scouring and boil off) and as "limited" dyeing assistants (anionic agents).* The chief value of this group of agents has been that of a detergent nature with limited application of dyeing assistants, though found useful when used in small amount in dyeing operation due to their dispersing action on dyes and softening action on "hard" water. Sulfonated fatty alcohols (lauryl, oleyl, cetyl); most of these products possess a moderate softening or lubrication value on all fibers.

*Condensation products (fatty acid chlorides and amine compounds).* These two chemical types of detergents possess desirable detergent value for scouring and preparation of material of all classes of fiber and constructions. They work satisfactorily under "hard" water and/or alkaline pH and many of them are satisfactory for use in peroxide and hypochlorite bleaching operations. These agents are quite useful for dispersing of acetate dyes used in dyeing acetate and nylon.

As a whole, these products possess rather low wetting out properties and foam rather heavily, which eliminates their use for dyeing operations of high-speed nature such as the continuous processes and on pressure package dyeing units and pressure staple fiber dyeing units. As these agents are anionic in nature they cannot be used with cationic active agents as they are not compatible with each other.

(2) *Preparation (scouring and dyeing) assistants.* Scouring and dyeing assistants that possess good preparation and dyeing properties are the alkyl aryl sulfonates. These agents are anionic in nature and are not compatible with cationic agents, but will work satisfactorily with non-ionic agents. As a whole these alkyl aryl sulfonates possess high wetting out and penetrating properties making them quite useful in dyeing as well as preparation operations. They

emulsify oils and other agents. This helps their value in the preparation of synthetic and blended staple fibers for scouring and dyeing operations.

These products are stable under acid and alkaline conditions as well as neutral and work most satisfactorily in "hard" water as well as saline and sea water solutions as was found out during the war periods.

One of the properties quite noticeable of this range of products is that it does such an excellent scouring, emulsifying, wetting out and penetrating action on practically all fibers that it leaves them in a "dry" state or "feel" as they do not impart any lubrication to fibers as the sulfonated fatty alcohol compounds do in their operation.

This property of leaving fibers too "dry" or non-lubricated is a property that is being investigated to a greater extent nowadays, especially in view of the increasing amount of synthetic fabrics now being processed which require as full degree of lubrication as possible during preparation, scouring and dyeing; otherwise they tend to chafe and cause broken fiber marks which show as shiny creases on folds in the fabric.

These new synthetic fabrics are all of low moisture content nature and where dried if fabric has no lubrication the static charges increase and cause trouble in drying and handling of fabrics.

Alkyl aryl sulphonates tend to foam heavily and are quite useful on intermittent or batch processing operations but do not possess as long a life on emulsification stability for scouring operation as the non-ionic compounds (ethylene oxide condensation compounds) and the amine condensates (condensation compound formed with cocoanut fatty acid oil and diethanolamine).

The many superior properties of the alkyl aryl sulfonates have been found of high value through blending with anionic agents that are chiefly of value as wetting out and penetrating agents and also those possessing retarding and leveling action on different type of dyes without affecting these colors' chemical and dyeing nature.

(3) *Wetting, penetrative and leveling agents of anionic nature.* Sulfonated oleyl and propyl compounds possess good penetrative and wetting out value for all types of dyes on both yarn and staple pressure dyeing operations as well as piece goods on jig, pad and continuous methods. It is advisable to use defoamers with this group as they tend to foam excessively on certain type of pressure machines and continuous piece goods processing units due to the high turbulent nature of the machine operating conditions.

The lignin sulfonates derived from purification and sulfonation of cellulose sulfite waste liquors have become of great value for use as leveling and retarding agents on vats,

sulfurs and many types of dyes except naphthols. This group is of anionic nature and therefore compatible with all other products listed under (1) and (2) classifications.

Lime-free animal glue is one of the older type of leveling and retarding agents used with vat and sulfur dyes as well as a protecting agent for wool in chrome and vat dyeing operations. One-eighth to one-half ounce per gallon of vat dyebath is the usual amount used of the lignin sulfonate and animal glue (freshly prepared).

These agents work more uniformly with the complete range of vat dyestuffs than do the non-ionic leveling and retarding agents which may precipitate out some vat dyes unless used in minimum amounts. It has been noted that lignin sulfonate and animal glue are slower in their action than the non-ionic agents but usually give a higher color yield in addition to their leveling and retarding action than non-ionic agents.

Non-ionic agents possess the value of acting as stripping assistant on alkaline hydrosulfite "stripping down" of vat, naphthol and direct colors with most uniform results obtained for redyed operation. The use of lignin sulfonate can be moderately successful with alkaline hydrosulfite "strip" but do not give as clean a stripping action as the non-ionic agents. Animal glue is not successfully used as a stripping assistant as it tends to precipitate on use of too strong alkaline "hydro" strip bath and does not possess the dispersing action of either the lignin sulfonate or non-ionic agents.

This dispersion property of non-ionic agents is of definite value as it permits holding the stripped precipitated vat and naphthol dyes in dispersion and prevents their redeposition on surface of yarns and materials being processed for redyed operation.

(4) *Penetrants and wetting agents of low foaming properties and defoamers.* Due to the increasing speed and turbulence that yarns and materials are being processed and dyed it has been found desirable to develop agents possessing less foaming action when dyed with vats, naphthols and other dyes. The sulfonated naphthalene compounds and phosphotized sulfonates have become of increasing interest and use where low foaming properties were found of value.

The use of defoaming agents with the higher foaming wetting and penetrating agents gives good results on the high-speed dyeing and processing operations as these agents are compatible both with the dye baths and each other. Some of the plants use various types of steam distilled pine oil, terpenes, silicone compounds in emulsion form and highly dispersed wax compounds as their defoaming assistants.

(5) *Non-ionic agents.* The chief type most widely used in the wet processing and dyeing operation is the alkyl aryl polyether alcohol or commonly known as the ethylene oxide condensation products. These agents have come forward rapidly in the textile preparation and dyeing field on all types of fibers and fabrics. Some of the chief properties of value of this type of non-ionic agents is that they are compatible with both anionic and cationic compounds so they can be used together to a limited degree and obtain the chief outstanding properties of both agents during the processing operation.

These agents are resistant to acids and mild alkaline bath up to pH of 10-10.5 and will show full activity at 140 to 200° F., at the higher temperatures some commercial non-ionic types do not possess as high stability as others.

Non-ionic products, though stable and resistant to hard water conditions, at higher temperatures over 160-180° F. the solubility of these products decreases in water bath though they will hold their emulsification properties at 180-200° F. over extensive periods when used in preparation and scouring operations of continuous nature.

The amine condensates prepared with cocoanut oil and amine compounds are quite compatible with non-ionic agents and mild alkalies, thus making a most economical and easily handled scouring formulation. One disadvantage possessed by both the non-ionic agents and the amine condensates is their low degree of rinsibility which may require several hot rinses at 140-180° F. before they are thoroughly removed from synthetic materials.

The non-ionic and amine condensates possess high wetting out action and detergency and prevent redepositing of removed soil and size back on to scoured goods. Non-ionic agents possess high dispersing value but act as retarding agents on both acetate dyes in dyeing acetate and nylon, as well as vat dyes during vat dyeing operation—this property has been previously discussed in this article.

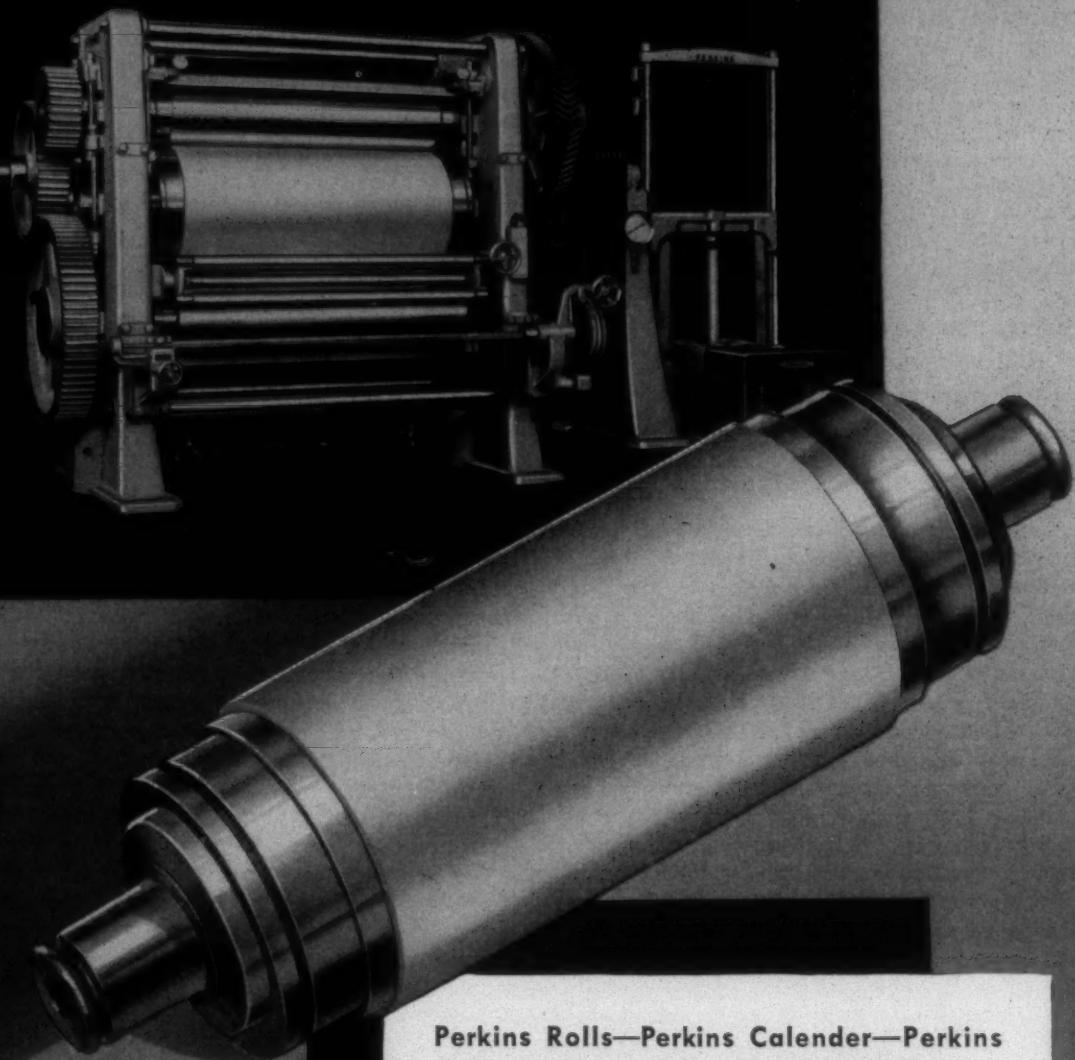
## Are You Alert To These Developments?

By J. B. GOLDBERG, Research Director, J. P. Stevens & Co. Inc.

**I**NCREASING consumption of the man-made fibers, particularly those of the non-cellulosic type, has caused the problems of the dyer and finisher to be multiplied rapidly during the past few years. Many conventional methods of processing fabrics have been discarded or modified to accommodate the unorthodox behavior of the test-tube babies now holding hands with, leaning on and occasionally antagonizing the older children of Mother Nature. While it is true that cotton, wool, silk and linen exist in a wide variety of types and qualities requiring a certain degree of versatility in the fabrics' preparation, dying and finishing,

their basic properties have been essentially unaltered over a long period of years. Changes in the methods of handling such materials have been developed to improve efficiency and create novel finished effects rather than to correct for any heretofore unknown characteristics of the fibers themselves.

The man-made fibers, on the other hand, possess scores of variables which have affected every known operation of the finishing plant. To enumerate some of them, there are variations in fiber diameter, length of staple, crimp, luster, cross-section, swelling properties, tenacity, elongation,



**Perkins Rolls—Perkins Calender—Perkins  
Hydraulic Power Unit—Ideal combination**

This 54" three-roll hydraulic friction calender—thirty-five ton pressure. Top chilled iron roll 12" diameter, intermediate cotton roll 22" diameter, bottom iron roll 18" diameter. Hydraulic unit combining efficiency with quiet operation, enclosed for maximum safety.

*There is no substitute for Perkins quality*

**B. F. PERKINS & SON, Inc.**  
ENGINEERS AND MANUFACTURERS  
HOLYOKE, MASS.

LARGEST MANUFACTURERS OF CALENDER ROLLS IN THE WORLD

## BLEACHING, DYEING & FINISHING

shrinkage, moisture regain, elasticity, specific gravity, heat sensitivity, chemical resistance and dyestuff affinity. Each of these, by itself and in various combinations, to say nothing of the further complications introduced when from two to four different fibers are used in blends, has drawn upon the know-how, ingenuity and imagination of almost every branch of science and engineering to keep the dyer and finisher abreast of the creations of the man in the white suit.

The fulfillment of the promise of easier living for the housewife or traveling man is being realized, and the contribution to a higher standard of modern living, like the power of a woman, is not to be underestimated. However, temporarily, at least, as I reminded chemists attending a symposium on the newer fibers over a year ago, the life of the technical man who must engineer new and better ways of converting fibers and yarns into useful fabrics has become increasingly difficult.

Although we have called attention to a large number of fiber and yarn characteristics which may be quite different from those of the natural fibers, there are a few outstanding ones which impose limitations on processing methods and which have been responsible for some radical changes in dyeing and finishing operations. The desizing and singeing, where necessary, of the spun yarn fabrics is closely parallel to those operations on cotton, with the exception of instances in which certain types of sizing materials are used which do not require enzyme treatment. Similarly, the removal of size from continuous filament yarn fabrics is usually simpler than the normal degumming procedure required for their nearest counterpart among the natural fibers, filament real silk. None of the man-made fibers, unless blended with high percentages of unbleached cotton, require the rugged boil-off or scouring procedures dictated by the presence of the natural waxes and non-fibrous impurities in cotton. In the rare cases in which bleaching may be required to obtain good white goods, the intensive treatment frequently given to all-cotton fabrics is unnecessary and undesirable.

In fabrics of viscose and acetate, a prime precaution to be exercised is avoidance of excessive tension which will affect the subsequent finished hand and appearance of the goods. Most of the newer synthetics, such as nylon, Dacron polyester and the acrylics, because of their hydrophobic nature, are less likely to be more easily abused in the wet state than in the dry, but a minimum of tension is still demanded for optimum results. In the case of nylon, there is the danger of the permanent setting of wrinkles and creases in high temperature boil-off, but conventional tensionless type dye jigs, dye becks and continuous boil-off machines have proven adequate. The difficulty in removing soil, particularly grease or graphite, from nylon has necessitated the development of special scouring formulae and methods to insure their complete removal prior to dyeing in white or light shades.

A yarn characteristic which is entirely new to the processor of fabrics woven of the natural fibers is exemplified by the unique ability of nylon or Dacron polyester, and to some extent the acrylics, to be "heat-set" or stabilized by the application of heat under careful control, the fabrics at the same time being enhanced in hand or finished appearance. Earlier methods of heat-setting depended on prolonged boil-off at very high temperatures or the use of a steam-

autoclave in which the fabric in roll form was subjected to steam pressure of up to 30 pounds. The results of both of these methods are not considered as satisfactory as those obtainable by specially designed machines of either the heated roll type or hot-air devices in conjunction with subsequent framing. In both systems, extreme care must be taken to impart adequate heat for a long enough time to produce a permanent "set" and the application must be uniform across the full width of the fabric as well as from end to end to avoid subsequent shading in dyeing and uneven shrinkage. Also, means must be provided for proper cooling by skiving, through use of cold air currents or passage over water-cooled rolls prior to batching-up. Excessively high temperatures or too long an exposure to moderately high temperature may cause yellowing of nylon, particularly objectionable for goods to be finished white or dyed in light shades, again emphasizing the need for exact control of the heat-setting operation.

Somewhat newer setting techniques depend on the use of radiant heat, since conventional drum-type contact dryers are said to result in higher shrinkage and to impair the hand of the finished cloth. One of these employs General Electric Co.'s Calrod unit heaters that permit operating at temperatures up to 1,500° F. Temperature control is achieved through a Reactrol system which automatically varies the power supplied to the Calrod units by use of a thermocouple.

Another uses fibre glass super-heaters in panels constructed in any desired size, and placed at the end of the tenter frame over the line of passage of the cloth before it is taken up on rolls. The panels provide uniform black radiant heat at temperatures up to 700° F. and through use of electronic potentiometer controls can maintain fabric temperature to within 5° F. It is claimed that operating cost is much less than that of any other electrical heating units, with production speeds of from 25 to 40 yards per minute and no alteration in color of the heat-treated materials. The panels may be made retractable to raise them from the fabric automatically as desired when the machine stops. Heat is applied to the top side of the fabric only and fibre glass reflectors on the under side direct back sufficient heat to increase operating speeds appreciably. A low-pressure blower affords means for air circulation to aid in carrying off moisture-laden air.

### Improved Control Technique

Improved control of the heat-setting operation is said to be achieved through the use of Minneapolis-Honeywell Radiametric pyrometers which detect the change in temperature of the cloth itself without direct contact. An "Electronik" instrument records this temperature deviation and automatically regulates the power input to the radiant heating elements. As a result it is claimed that increased production, greater uniformity and improved fabric quality are assured.

Disclosed in a patent issued recently to British Nylon Spinners, a new technique for heat-setting nylon depends on passage of warp knitted fabric on a tenter through a bath containing mercury at 200° C. for 15 seconds. It is claimed that the mercury provides better heat transfer than a gaseous medium and thus a superior degree of setting is obtained.

Continuous bleaching of woven fabric to give excellent white on rayon in a matter of a few minutes is entirely

practical with Textone according to a recent report, the major obstacle being the construction of reinforced plastic equipment, since it has been estimated that this might run as high as \$10,000.

While the application of direct dyes, sometimes after-treated to improve their fastness, has continued to play an important part in the processing of rayon fabrics, especially where cost is a factor, more stringent demand for the best in color-fastness has led to great use of continuous vat dyeing. The highly-publicized Vat Craft method, heralded several years ago as the first commercial use of atomic energy in vat-dyeing fabrics photo-chemically, has apparently been abandoned. The Pad-Steam process and the Williams machine are examples of comparatively new systems adopted by the industry, both considered best suited for production runs of over 2,000 yards. It has been reported that they afford good union dyeing of cotton and spun rayon blends and better penetration on slab-type constructions composed of thick and thin yarns. Not too long ago the "hot-oil process" was developed for use in the Williams unit. Contact of wet fabric with an inert white oil heated to temperatures well over the boiling point of water forms a steam-in-oil emulsion which shortens dyeing time without the use of a closed system, the oil subsequently being emulsified and removed. This system was considered particularly necessary for the application of shades of blue where the conventional continuous dyeing methods did not afford the higher temperatures required. The later introduction of the Marhen process, also developed by the General Dyestuff Corp., with provisions for controlling the reduction potential involved in the application of vat dyes has minimized the importance of the hot-oil method.

Although it was described in the literature only three years ago, the English Standfast molten metal process is based on principles investigated as early as 1903. Fabric is first prepared and subjected to uniform drying, then conducted through a U-shaped tank in which a molten metal alloy is maintained at a temperature of 200° to 220° F. On the metal surface at one end of the "U" is a reduced dyebath while on the other end is a salt solution wash liquor. As the cloth passes through the molten metal which serves as a reducing medium free from air, it is subjected to the high static pressure of the metal. Emerging from the metal bath, passage through the salt solution serves as a means for rinsing out the metal, following which oxidation and scouring take place. Short runs are considered economical, since only a small amount of reduced dye liquor is used, and cleaning of the machine is comparatively simple. Good penetration and uniform color application in dense fabrics or slubby yarn type constructions are possible, with no end-to-end or center-to-side shading. The only United States installation of the molten metal process which has come to our attention is in a New Jersey plant where it has been used to apply vat colors to embroidered fabrics in which it is normally difficult to obtain the same shade on the embroidery and the ground.

#### G. D. C. Genray Process

Last Winter, General Dyestuff Corp. announced the Genray process as a new method whereby a slowing down of the conventional continuous dyeing operation afforded better diffusion of the dyestuff into fiber and successful vat dyeing of heavy shades on rayon. Mill runs have been

carried out at from 20 to 40 yards per minute, yielding excellent fastness to both laundering and crocking, with none of the shading difficulties commonly encountered in jig dyeing. Although elapsed time in dyeing and developing is somewhat greater than in jig operations, it is estimated that less labor is required in this process, shade corrections are eliminated and there is a saving in the use of cloth leaders. Insufficient demand for short runs of dark shades has limited any widespread adoption of the Genray process.

Having survived the plastic age and bearing up well during the first few years of the atomic age, we now seem to be entering the pressure age—with the accent on high-pressure living, high-pressure sales promotion, and high-pressure textile processing equipment.

The dyeing of fibers, yarns or fabrics under pressure is not new, "pressure cooker" type trial dyeings having been explored at the Bachmann-Uxbridge Worsted Co. in 1938. The problem of obtaining level dyeing and good penetration of dark shades on some of the newer synthetics such as Orlon acrylic fiber and Dacron polyester resulted in extensive study of means of improving standard equipment to make the application of dyestuffs at high temperatures and pressures more practical. Even if the design of a pressurized dye beck were practical, it has been demonstrated that enclosed dye becks are not suitable because of the danger of rope marks so readily encountered when handling the newer thermoplastics at the boil. In the case of dye jigs, the introduction of creases and wrinkles and excessive fabric stretching are equally objectionable in a pressurized system. Both becks and jigs also impose limitations due to the slow rate of color pick-up and leveling and the inability to provide for practical sampling at intervals to insure good shade matching.

#### Pressurized Dyeing Machine

Last Summer, the Du Pont Co. announced a newly-designed pressurized dyeing machine called the Barotor. The original model installed at its Newport textile laboratory had a rotor, six feet in diameter with a capacity for 600 yards of material, enclosed in an autoclave. The fabric was threaded through a series of supporting bars so mounted that during the slow rotation of the rotor there was a progressive movement of the fabric permitting passage through the dye liquor several times per minute enabling rapid color pick-up and leveling. A series of small tabs of the fabric sewed to the outer material along the seam with a weak thread serve as samples to be torn free as desired by a sampling bar and hook which may be inserted and withdrawn through a set of valves without loss of pressure. Today an improved commercial model with a new loading device and only one-fifth the number of bars, all fixed, can handle about 1,000 yards of a four-ounce cloth at one time. The loading operation requires only five minutes and complete dyeing cycle is less than five hours. It has been reported that one machine of this improved type will be ready for installation at the Waldrich Co. within a few months. In addition to its use for obtaining level dyeing on the newer synthetics, experimental runs show excellent results on acetate sharkskin, ordinarily subject to shading when handled on jigs.

Orlon fiber, top and yarn are being dyed under pressure to give better fastness properties than are obtainable by

## BLEACHING, DYEING & FINISHING

other means. The use of costly carriers is eliminated and at the same time superior fastness and efficiency are achieved through pressure dyeing of Dacron. The treatment of polyester materials, such as Dacron, with sulphuric or nitric acid followed by washing was described in two British patents as means for improving dyeing, while a third patent claimed better dyeing through the use of a heat-treatment at 230° to 255° C. Just a few months ago the newer type 42 Orlon acrylic staple was made available with claims for better acid dyestuff affinity at lower temperatures and no change in dyeability on heating. The dyeing properties of Acrlan with acid dyes, too, have been improved since early this year, and much lower concentrations of acid can be used. The Thermosol method of dyeing, particularly suited for the hydrophobic fibers, was described by the Du Pont Co. in 1949, and is being used to some extent to produce bright level shades with good fastness properties on Dacron fabrics of continuous filament and staple fiber yarns.

Two new dyeing machines for nylon fabrics have been introduced by Burlington Engineering Co. One is designed for marquisettes or woven sheer constructions, with a capacity of up to 6,000 yards 60 inches in width, while the other is built to handle tricot knitgoods of greater width. These machines operate on package-dyeing principles and permit boiling-off, bleaching and dyeing on beams. Solutions are circulated through the material at rates of from 1,000 to 1,400 gallons per minute with a two-way flow system available if desired. It is said that there is a saving of time and labor, dye lots are larger and the shorter liquor ratio permits appreciable reduction in the amount of chemicals used. At the same time, the dyed goods show no curling of the selvages and are free from rope marks.

About a year ago the textile research department of American Viscose Corp. published results of preliminary tests made on processing acetate tricot in open width. The goods are first pre-set in boiling water, minimizing the tendency to produce creases, then dyed at a starting temperature of 160° F., raised to 180°-200° F. within 45 minutes, vacuum extracted by a continuous operation and finally dried at 220° to 260° F. It was reported that strength of the fabric was improved by as much as 20 per cent, yield was greater and shrinkage less than when the goods were dyed in the rope. Four machines are in commercial use at the present time.

Most chemists remember having been advised at some time or other that a particular operation required so little of a certain chemical that all one did was walk by the reaction vessel with a bottle of the chemical in his back pocket. While the dyeing of textiles has not yet been so simplified that one can drive a truck load of fabric by a dyehouse and find them converted, the trend is certainly toward greater efficiency and simplicity of operation.

One of the newest continuous systems designed for dyeing all types of fabrics is the Bond dyeing machine, sponsored by the Pittsburgh Coke & Chemical Co. An average range consists of five units of pairs of perforated plates between which the fabric passes horizontally with dye or chemical liquors forced through the material by a pressure unit with equalized pressure on both face or back. Liquor feed is by gravity with automatic controls governing temperature and rate of flow, the upper pressure units can be raised and lowered pneumatically and automatic controls

will also govern fabric tension. The system features extreme flexibility for runs as low as 50 yards, and easy cleaning for rapid change of shades. It operates on a low volume liquor ratio at speeds of from 20 to 120 yards per minute and may be used for desizing, scouring and the application of various types of finishes as well as for dyeing with all types of dyestuffs. Two operators are required for one range which occupies only about one-third the floor space needed by comparable continuous dyeing machines. An outstanding feature is the fact that dyestuff exhaust rate, affinity, solubility or temperature dyeing rates do not affect the uniformity of color application. It is reported that by this Fall two Southern finishing plants will be equipped with commercial installations. One will be capable of handling all types of synthetic fabrics in widths up to 66 inches, the other will be used to apply vat dyes to cotton goods in widths up to 50 inches.

Other dyeing methods described in the literature appear to be novel, if not entirely practical at the present time. Johnson & Johnson received a patent on a wet processing machine in which fabric is passed in rope form under tension through a pyrex glass tube substantially filled with treating liquid. After immersion in the tube, the cloth passes through an entrance tank containing the treating liquid then between ringers. While considerable economy in scouring, bleaching and dyeing is claimed by the patentees, it is not likely to be suited for processing rayon or fabrics of the new synthetics. Ultrasonic dyeing has been reported in the British journals on several occasions, with claims of improved dye penetration in a short time, but no commercial applications in this country have been called to our attention.

The vast amount of publicity given to the newer synthetics because they go into garments which can be worn without wrinkling or washed without ironing has led many consumers to believe that rayon garments can be wrinkled without wearing or worn without washing. We all know that modern finishing methods have done much to correct such erroneous impressions. Viscose is admirably suited for the application of resin finishes to impart a good degree of crease-resistance or the ability to recover from creasing. While the technique of resin application is well-established by now, better knowledge of the effects obtained under varying conditions has led to improved methods of drying and curing to insure the best results. Tension in the warp-wise direction is kept to a minimum by use of a loop or airlay dryer, or in many cases through use of an overfeed pin tenter. Rapid drying is considered responsible for migration of the resin to the surface, resulting in a harsh coating, while the control of curing is equally critical. Adequate washing to remove any traces of incompletely polymerized resin is generally recommended but is not regarded as essential by all finishers. Black radiant heat is currently employed in many finishing plants to give instantaneous resin retention with minimum efficiency cited as advantages.

Urea formaldehyde resins and modifications of these materials are used extensively to affect control of shrinkage and stretch in rayon fabrics. In general, the processes require application of the resin to the prepared goods by means of a pad, drying, curing, washing and drying. In some cases goods are also Sanforized in the finishing operation. Several years ago the Cluett, Peabody Co. announced Sanforset as a stabilization process based on the use of glyoxal with dimethylol urea. Although formaldehyde has long been known as a good medium to effect



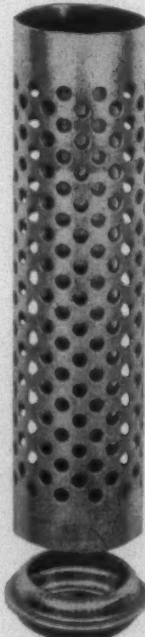
*Now!  
precision  
Matched Sets*

## CORDUROY CUTTING KNIVES

- Supplied in matched sets of 330 knives.
- Precision ground double-bevel cutting edge.
- Finest alloy steel, correctly tempered for long life.
- Accurate to  $\pm .001$  tolerance.

ALSO AVAILABLE UNGROUND.

**COLEMAN COMPANY, INC.**  
P. O. BOX 1351, GREENVILLE, S. C.



## PRECISION BUILT DYE TUBES

for your package dyeing machines

MADE EXCLUSIVELY FROM  
TYPE 304 STAINLESS STEEL

PERFECTLY SIZED FOR  
ROUNDNESS

- MACHINED ON EACH END FOR FLATNESS AND ROUND EDGES
- ELECTRICALLY FUSED JOINT
- EVENLY SPACED HOLES

Their durability has been proved by rigid acid and crush strength tests.

Several hundred thousand now giving complete satisfaction in Southern dye plants.

Write for Quotation

**TOOL SERVICE ENGINEERING CO.**  
309 W. Crowell St. Monroe, N. C.

*Laurel*

## Textile Specialties cut your processing costs

### Laurel Scours and Penetrants

Laurel Brand Soaps—all fibers  
Laurel Hydrosol—wool, cotton, mixtures  
Laurezol—cotton  
Lauretex Transfer Removers—all fibers  
Lauretex #340  
Laurel Transfer Solvent #622C  
Laurel Synthetic Detergents and  
Penetrants  
Leurel Supergel RS—all fibers  
Laurel Boil-off Compounds—  
rayon, nylon, mixtures  
Laurel Triconate—  
rayon, nylon, mixtures  
Laurel Oils—Wool, Rayon—Sulphonated,  
Scouring, Fulling, Finishing Oils for  
all purposes, Stainless Knitting  
Machine Oil

### Laurel Textile Finishing Agents

Laurel Textile Oil—cotton, rayon  
Lauramine #1—cotton, synthetics  
Lauramine #20—softener for package-  
dyed cotton yarns and blends  
Olamine (Cation Active)—cotton,  
synthetics  
Yarn Conditioners—cotton and mixed  
yarns  
Hydrocop and 3B Softener  
Emulsion C-4R—lubricant  
Ruxite NF—conditioner and softener  
Softeners and Anti-static Compounds—  
Regent Coning Oil—Orlon, Dacron,  
Acrlan, Nylon, Acetate  
Spinot RL—Orlon, Orlon-Wool  
blends, Dacron  
Laurel Hosiery Finishes—all fibers  
Permanent Resin Finishes—all fibers  
Flame Retardant #527C—cotton and  
synthetics  
Water Repellent Compounds—all fibers  
Weighters and Conditioners—all fibers  
Dullers

Laurel Products are available  
for all fibers and fabrics. Call  
on us for recommendations to  
meet your specific problems.

LAUREL SOAP  
MANUFACTURING CO., INC.

*Wm. H. Bentzel's Sons*

ESTABLISHED 1909

Textile Soaps, Oils, Finishes

2610 E. Tioga Street  
Philadelphia 34,  
Pa.

#### Warehouses:

Paterson N. J.	Charlotte N. C.
Chattanooga Tenn.	

## BLEACHING, DYEING & FINISHING

stabilization, it is not practical to use it alone because of difficulty in controlling the reaction with cellulose. Recently, the American Viscose Corp.'s Avco set process was improved and simplified and has become increasingly popular. The reaction with formaldehyde is modified through use of an alkali-soluble hydroxyethyl cellulose and excellent results are being obtained commercially. There is no danger of chlorine retention and damage from bleach in laundering, commonly encountered with most of the resin treatments. Fabric life is also prolonged through reduced swelling of the fibers when wet. Dan River Mill's X-2 process is another chemical stabilizing method first publicized in 1951 and currently used to a limited degree. Less than three months ago the Aquex Development & Sales Corp. announced that by use of Aquex resin in combination with Cuprofix-treated direct-dyed colors on viscose rayon it was possible to obtain fully washable fabrics with less than two per cent residual shrinkage, with tensile strength and abrasion resistance superior to most other finishes. The creation of a finish which will permit the washing of crepe fabrics with less than two or three per cent shrinkage is still of major interest and laboratory investigation of such a process is understood to be underway by at least one chemical manufacturer. Courtaulds Ltd. is said to be currently exhibiting shrink-resistant crepe finished by its patented process.

Late in January, a report emanated from Boston on a new development in shrinkage control described as the Hatay process. Although details were not released it was indicated that all types of cotton and fabrics of the man-made fibers could be stabilized while free from tension by the imposition of infrasonic impacts. A feature claimed for the process was the avoidance of shine normally obtained on compressive shrinkage ranges by contact of the fabrics with hot metallic surfaces. It is said that the rayon fabrics require a preliminary chemical treatment to reduce water imbibition and swelling, the subsequent stabilization by imparted mechanical energy resulting in thorough relaxation and a complete change of hand. Operating speeds of up to 100 yards per minute are considered entirely practical. We have been advised that a full-sized machine is being constructed for use in a New England plant.

Enthusiasm for the excellent receptivity of viscose fabrics for resins which render them crease-resistant, water-repellent, or dimensionally stable has undoubtedly discouraged most finishers from exploring the possibilities of modifying and improving fabrics containing appreciable amounts of acetate. Research pioneered by the textile application research division of the Celanese Corp., however, has disclosed that the application of silicone resins can impart good durable water-repellency, improved abrasion resistance and tear strength, improved wrinkle-recovery and a reduction of needle cutting in sewing.

A reduction in high needle temperatures which frequently cause fusion of the fibers in heavy Orlon acrylic fabrics can be achieved by similar silicone treatment. Recent laboratory investigation has indicated that the application of American Cyanamid Co.'s Permcel resin to 100 per cent acetate fabrics contributes many of the desirable properties obtained with the silicones. Water repellency with good durability after repeated laundering and improved sewability and tear strength have been observed. While resistance to dry-

cleaning is poor, certain applications, such as for umbrella fabrics and shower curtains, are considered practical particularly since cost of the treatment is comparatively low.

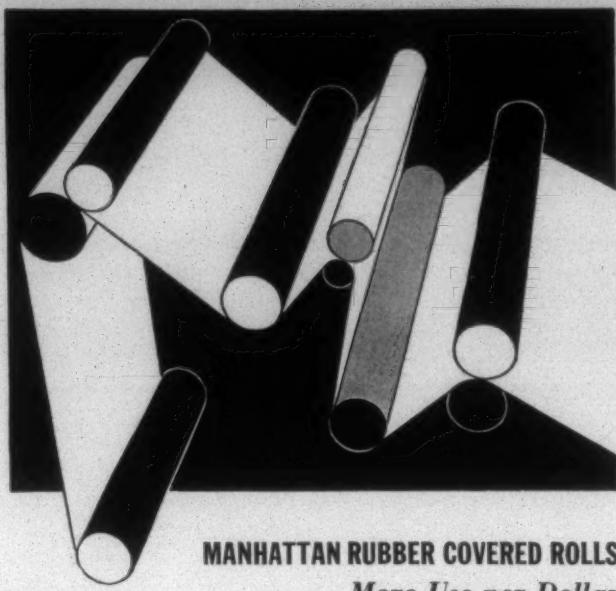
The Roto-Tone process, involving the use of fast-drying dyes and a technique said to be similar to that employed in the paper printing industry, was announced recently as the first successful commercial method for printing dope-dyed acetate fabrics.

The flameproofing of viscose materials is a subject of recurring interest and of particular concern during these days when attention is focused on the possible enactment of state or federal legislation to control the manufacture and sale of dangerously flammable textile apparel fabrics. Although several methods which have been described in the literature are considered reasonably effective, high application costs, high add-on with the resultant bad effect on hand, and lack of resistance to repeated laundering are generally regarded as leaving much to be desired. While the suggestion that the newly-developed Southern Regional Research Laboratory THPC process for flameproofing cotton might also work on rayon could be regarded as treason by the loyal supporters of the world's most popular natural fiber, it is possible that the merits of this new product may be considered for fabrics of man-made fibers. There have been no new disclosures in the literature to indicate further progress in the fireproofing of nylon, Dacron or the acrylic fibers (other than Dynel). Johns-Manville has been working on the development of high-temperature resistant Orlon by the Du Pont process reported a few years ago and is now prepared to offer for evaluation limited quantities of fabric in widths up to 36 inches.

The first demonstration of a new cloth dryer which utilizes superheated steam instead of hot air was given at the plant of Cliffside Dyeing & Finishing Co. recently. This dryer, called the Vapojet, is based on an original Swiss design and is the result of five years of development by the James Hunter Machine Co., co-operating with the New Jersey finisher. The success of the machine is due to the use of superheated steam impinged on the fabric by a series of nozzles at a very high velocity. These telescopic nozzles are placed within one-fourth of an inch of the fabric surface and may be adjusted automatically as the width of the cloth changes. Overfeed tenter clips provide up to 20 per cent overfeed giving advantages of a pin-type tenter, and comb-type lower plates allow the selvages to dry evenly. The system can also be used in pre-dryers to increase output. It is said that higher speed of drying, smaller floor space requirements, lower operating cost and superior results in appearance and on the hand of all types of fabrics are some of the attributes of the Vapojet system. Of particular interest in its application to the finishing of rayon fabrics is the claim that there is no migration of resin or other finish to the surface during drying, resulting in better crease-resistance and no harshness or brittleness of hand due to overdrying or surface resin effects.

Some publicity has been seen on the application of nylon polymers to fabrics composed of cotton, rayon or acetate to improve their resistance to abrasion, supposedly simulating to some degree the effect of introducing a small percentage of nylon staple in the fiber blend. However, there is currently little use of such compounds and Du Pont is believed to have abandoned plans for the commercial production of a nylon polymer emulsion for such applications.

What might be described as an international development



**MANHATTAN RUBBER COVERED ROLLS**  
*More Use per Dollar*

You save money on rolls and lower your production cost because Manhattan custom-covers roll centers to meet your special operating conditions. Manhattan Rubber Covered Rolls maintain their density, squeezing out acid or alkali solutions hot or cold in dependable day-in day-out service.

Call the R/M specialists next time you need rolls rubber covered.

RUBBER LINED TANKS, PIPE AND FITTINGS  
RUBBER AND ASBESTOS PRODUCTS

**R M** **RAYBESTOS-MANHATTAN, INC.**  
N. CHARLESTON. S.C.

"Service is very important to me...  
that's why I call **SOLVAY FIRST**  
for these Textile Chemicals

OF COURSE, I CAN'T keep my production going without textile processing chemicals. But I have found that service is an important factor to consider when I buy these chemicals.

A GOOD EXAMPLE of this is Technical Service. I have found from experience that Solvay's *exclusive textile* Technical Service is really tops in the field. These textile specialists can tackle a problem and come up with valuable advice and suggestions on how to overcome that problem. They really work with you . . . it's almost like having a staff of textile experts working for you.

THEN THERE'S Solvay's efficient delivery service—prompt and on-time, as you need it.

And because service is so very important to me, I always call Solvay first for these textile chemicals."

**SOLVAY PROCESS DIVISION**

Allied Chemical & Dye Corporation  
61 Broadway, New York 6, N.Y.

BRANCH SALES OFFICES:

Boston • Charlotte • Chicago • Cincinnati • Cleveland  
Detroit • Houston • New Orleans • New York  
Philadelphia • Pittsburgh • St. Louis • Syracuse

**SODA ASH**

**CAUSTIC SODA**

**LIQUID CHLORINE**

**SODIUM NITRITE**

**POTASSIUM CARBONATE**

(Calcined and Hydrated)



# BUTT-SEAMING SEWING THREAD

For Cloth Room Stitchers and  
Bleachery Sewing

ALL  
NUMBERS  
CARRIED  
IN STOCK  
FOR  
IMMEDIATE  
DELIVERY

**SIGNAL THREAD COMPANY**

James Building, Chattanooga, Tennessee • Phone 7-7171

Walter T. Forbes, President • David Saunders, Vice President  
CHATTANOOGA • CHARLOTTE • DALTON • DETROIT

**High Quality**

**SEWING  
THREAD**  
CHATTANOOGA, TENNESSEE

## BLEACHING, DYEING & FINISHING

to improve a domestic situation is contained in the report of an English laundry supply concern which offered Siotex to the trade as a new finish to increase the wear life of sheets, towels and pillow-cases. Investigation has disclosed that this was a newer version of the French Texylon process announced in Paris in 1951 as the invention of a Hungarian chemist with claims for a simple finishing treatment to yield higher abrasion resistance on all types of fabrics, including rayon. The original process comprised the impregnation of fabrics with a sodium silicate solution, precipitating the silica with a mineral acid, then applying a partially polymerized urea formaldehyde resin and paraffin wax emulsion. There have been no further reports of use of this process in the United States.

The accidental discovery of dyes which were found to increase the water repellency of cotton by 12 times and wool by 60 times without altering the texture or appearance of the fabrics was described at a meeting of the American Chemical Society last Fall. To date there has been no further report on the evaluation of these dyes or possible application to man-made fibers.

The introduction of cotton, rayon and the synthetic fibers in rugs and carpeting has presented the problem of soil-retention which is considered greater than that encountered in all wool floor coverings. Disclosure of a patent issued in December to the Mohawk Carpet Mills Inc. covering a chemical treatment, now known as Chex Soil, to make synthetic carpet fibers soil-resistant, resulted in an announcement of soil-resistant processes by two competitors, Bigelow-

Sanford and Alexander Smith Inc. The latter company stated that its Juvenon process has applications in other fields, such as for upholstery and drapery fabrics.

Three new fabric finishes were advertised recently. Everglaze 500 was announced by Joseph Bancroft & Sons Co. as the latest addition to its growing family of finishes, this particular one being credited with the ability to transform ordinary cloths into wool-like, low-luster fabrics with durable wrinkle-resistance and stability. We have been advised that it is applicable to viscose as well as cotton and imparts stabilization and improved abrasion resistance; hand may be wool-like or linen-like as desired. A prominent converter offered a permanent ripple textured effect on nylon produced by a new finishing process, details of which were not disclosed. Although identified as Broadtail, which our wives would associate with cooler weather raiment, the cloth is being promoted as a new "wrinkle" for sport shirts. At the British Industries Fair in London, a new finish to give a permanent ruffled texture to acetate, nylon and Terylene fabrics was revealed as the joint invention of the Bradford Dyeing Association Ltd. and the Bleachers' Association Ltd.

It is apparent from this review of the news in dyeing and finishing that the chemists and engineers, though sometimes caught panting in the race to keep up with the "hot-rod" textile creations of their fellow-scientists, are still in the running and prepared to make attractive and merchantable whatever can be knitted or woven into fabric.

Mr. Goldberg, who just this month announced that he plans to leave the Stevens firm to set up his own consulting office, spoke to the textile engineering division of the A.S.M.E. last month.

## Maintenance, Engineering & Handling

### Show-Conference Spotlights In-Plant Transportation

FORK-LIFT trucks offered the most spectacular improvements of any of the equipment shown at the fifth National Materials Handling Exposition, held concurrently with Materials Handling Conference, May 18-22 in Philadelphia's Convention Hall. In fact, Elmer F. Twyman, vice-president of the Yale and Towne Mfg. Co., Philadelphia, predicted that sales of the fork lift and other handling machinery will probably reach an all-time high in 1954.

At the same time, however, it was pointed out at the meetings of the Materials Handling Conference, which held morning sessions May 19-21, that narrow aisles in spinning and weaving rooms restrict the use of fork-lift trucks to loading platforms, mill yards, warehouses and some parts of finishing plants. In this regard, L. S. Peterson, of Cleveland Tramrail Division, the Cleveland Crane & Engineering Co., Wickliffe, Ohio, pointed out that mills are finding new and ingenious applications for the overhead systems.

The Materials Handling Conference was divided into five

separate topics, discussions of which ran concurrently. They were: (1) handling in process; (2) warehousing and shipping; (3) packaging for improved handling; (4) bulk handling; and (5) requirements for organization-study analysis. Fee for the conference was \$15, while admission to the exposition was free to business officials.

It was pointed out by officials during the conference that because fork-lift trucks are becoming more numerous in large plants, they are bringing problems of plant traffic and safety with them. The job of keeping these trucks busy is being handled in many plants by dispatchers working with walkie-talkie radios or public address systems. Johnson & Johnson, New Brunswick, N. J., has seven trucks equipped with radios, it was said.

The safety factor involving fork-lift trucks is related to the driving of these trucks and to the truck design, it was explained. Generally, manufacturers insist their trucks won't tip over no matter what the circumstances, but one official

suggested that companies using them should test the vehicles thoroughly before allowing an employee to use them.

Other executives pointed out that the safety factor with the small in-plant truck had a direct bearing on speed. If the speed is cut down, one source said, the danger of turning over is reduced considerably. Another danger point is speeding when the forks are raised more than 24 inches from the floor.

In discussing overhead materials handling, Mr. Peterson declared that only two ways are practical in handling heavy beams to machinery with creels on top. These are either the cumbersome portable floor gantries, or the more modern overhead track or crane system.

Mr. Peterson cited the No. 2 plant of Excelsior Mills, Clemson, S. C., as a user of the Cleveland system to serve a large twister room and the beam storage adjacent to it. The overhead system handles rayon beams from railroad dock to storage, he said, and thence to the twisting machines. Empty beams are returned on the same equipment.

Especially interesting as examples of overhead materials handling, Mr. Peterson cited as the two large weave rooms of Pacific Mills at Lyman, S. C., where there are approximately 700 looms of 50 and 100-inch widths for sheeting. Because the 1,500-pound beams are transported overhead, the looms can be placed closer together, leaving more space for looms than would otherwise be possible. The overhead hoists make it easier for the doffers to place the beams in or remove them from the looms, he said.

Representatives from Rohm & Haas, Philadelphia, Pa., brought out during the warehousing and shipping session that their company feels it is saving money on shipping techniques and therefore is requiring suppliers to ship raw materials in specific packages that they demand. The company feels that it has a definite competitive advantage because of its materials handling system, they said.

It was further pointed out that materials handling in large textile mills and other plants has become a science that calls for the co-operation of many departments within the company. Inventories and manufacturing sequences are also related to the problem, it was pointed out.

Pointing up the value of co-operation, one firm found that all of these operations went smoother after a materials handling conference at which the purchasing agent, storekeeper, chief engineer, production control official and material handling engineers compared notes and began working together.

One official declared that it cost 37 cents to keep on hand material which was worth a dollar for one year, as he emphasized the close relationship between materials handling and inventories.

A roll of cloth "is just a round log to railroad shippers" and therefore is subject to damage, it was pointed out in a session on packaging. When packaged as a case lot, however, it receives better attention.

There is a new packaging concept called "intermediate packaging" that is drawing attention, forum members were told. This is a package that breaks down into elements which may be handled more readily by the retailer or user. This is to combat the need for sometimes putting a product into a package that costs more than the material being shipped.

Many plants are now time studying the materials handling operation and installing incentive systems, forum listeners learned. There is some question about the efficiency

of this idea, however, since the system has been known to cause more than the average amount of damage to goods. One representative said that the incentive system in materials handling probably saved his firm money, but that officials were worried about the high rate of damage caused by it.

During the warehousing session, one representative said that his company considered it better to discard pallets when three boards were broken rather than to repair them. Another representative said his company had cut damage from the nails in the pallets by counter-sinking the nails and placing steel bands around the edges. Others argued that pallets of plywood and paper were considerably reducing shipping and handling costs.

"The fifth National Material Handling Exposition . . . marks the beginning of a new era for the materials handling industry and for American industry as well," said Sheldon K. Towson, former president of the Materials Handling Institute, in discussing the opening of the fifth exposition. Because industry is today faced with "a severe competitive position," production costs have become of primary importance, and materials handling has thus taken on a new significance, Mr. Towson declared.

At the exposition Yale and Towne, which occupied the whole stage in its exhibit, showed a fork-lift truck that can make a circle within a circumference of about six feet, and another truck that can work in six-foot aisle spaces. This equipment makes right angle turns at the end of the aisles, and the claim is that it is especially applicable for use in textile warehouses.

The Clark Equipment Co., Buchanan, Battle Creek and Jackson, Mich., displayed the Clark X-70 which it called "The Fork Truck of the Future." Still in the development stage, Clark showed the experimental model to get customer reaction on the new styling and mechanical innovations which were included. Among the features of the experimental truck are a fully automotive-type seat, counter-balanced hood and greater accessibility for maintenance and repair work.

Clark also displayed a simple, rugged automatic drive for gas-powered fork-lift trucks called the "Hydratork," which combines an adaptation of the power multiplying torque-converter widely used in the automotive field with a greatly simplified forward-reverse transmission. Also in the Clark booth were standard model fork-lift trucks powered by liquefied petroleum gas (LPG). Simple modification of the engine and installation of a compact, field-tested "conversion unit" adapts standard gasoline-powered fork-lift trucks for LPG operation, according to the Clark company. LPG, in normal commercial usage, a mixture of butane and propane under pressure, is a desirable fuel because it burns clean without giving off obnoxious fumes and leaves no unburned carbon, lead compound, or varnish deposits. At present Clark LPG equipment is available for factory installation on Trucloader, Clipper, Carloader and Dynatork Carloader models.

Automatic Transportation Co., Chicago, Ill., displayed what it called the first gas-powered industrial truck with electric transmission. Called the Dynamotive, the truck featured radical changes in both design and appearance. It was designed by B. I. Ulinski, director of engineering of Automatic, and styled by Col. Alexis de Sakhnoffsky, widely-known industrial and sports car stylist. The same company also introduced a stacker which it says can operate in

## MAINTENANCE, ENGINEERING & HANDLING

aisles six feet wide and can tier goods 11 feet high. According to the company, it is the only battery-powered industrial truck with four wheels, having three point suspension to compensate for uneven flooring.

Chief magnet for attention at the booth of Towmotor Corp., Cleveland, Ohio, was the new TowmoTorque Drive which makes it possible to select reverse drive position, before coming to a complete stop, for rapid takeoff in the opposite direction. At other times the operator can use Towmotor's new Creep Control to move his truck along inch by inch while the engine is operating at a high speed to rapidly raise a load. Also attracting attention was Towmotor's new power steering.

Baker-Raulang Co., Baker Industrial Truck Division, Cleveland, introduced a 1,500-pound capacity fork-lift truck, which a company official said provides maximum maneuverability, ease of maintenance and operator convenience. The new Baker truck is called the FL-15. Like other trucks at the show, this one has all of the major maintenance elements in a cowl directly under the driver's seat. This cover is bolted to the frame.

Baker-Raulang also introduced the Gas-O-Matic which, the firm says, provides new fuel economy, smoothness of acceleration, ease of maintenance, safety and operator convenience. It uses a gasoline engine, a specially designed variable voltage generator and an electric motor as its power system.

Key element in the system is the variable voltage generator, which is an integral assembly with the engine connected to the drive shaft. As the engine r.p.m. increases, voltage output of the generator builds up, following a smooth unbroken curve pattern.

An official of Hyster Co., Portland, Ore., said that the development of the modern lift truck is nearing a peak and therefore the use of both pallets and lift truck attachments for handling unit loads has increased in proportion.

He said that in many textile mills, particularly, there has been a trend toward the elimination of pallets where possible. However, he added, there are many instances where, because of unusual storage or loading problems, the conventional pallet is and probably always will be necessary.

"To supplement the use of pallets," he continued, "the field of lift truck attachments has expanded a hundredfold in the past few years."

Today, there are mechanical devices for use with lift trucks for almost every conceivable type of load, he explained. These devices will mechanically or hydraulically grab, turn, shift, revolve, tilt, dump and up-end things.

Hyster now makes available for its line of lift trucks and materials handling equipment more than 100 different attachments and devices to suit almost every type of palletless handling, he said. In addition, several reliable manufacturers build specialized types of attachments.

Among the other equipment which attracted attention was the F-1 strapping machine developed by Acme Steel Co., Chicago, and previously introduced at the Southern Textile Exposition in Greenville. This machine allows women workers to strap packages at high volume and to uniform tensions with less fatigue.

General Electric Co., Schenectady, N. Y., showed drive components for electric trucks, conveyors, cranes and hoists. The exhibit included operating displays of electronic timers

and relays. Other operating displays showed an electric truck drive with full magnetic control and a hoist drive with a 12-foot tower to demonstrate the features of the speed-variator.

Although streamlined fork-lift trucks and overhead cranes suited for big business dominated the materials handling exposition, there were many of the smaller, more inexpensive items available to aid small mills in the struggle against rising costs and lower profits.

Among these was a new type of wheel conveyor or Y-switch that can be rotated to connect a two-way belt conveyor with either of two wheel conveyor lines set at different levels. This was introduced by Rapids-Standard Co., Inc., Grand Rapids, Mich.

The device is called the flip-switch and the manufacturer maintained that it eliminates making gravity-line pitch adjustments to change direction of material flow, and permits handling of both incoming and outgoing stock on a single belt unit.

The equipment incorporates two gravity wheel sections mounted back to back in a rigid frame, with the entire assembly pivoted at both ends.

In one position the flip-switch line connects with a warehouse line to flow goods away from the belt unit. Rotating the assembly brings up the opposite flip-switch section that matches the pitch of a warehouse line flowing goods back to the belt unit.

The single self-contained unit takes the place of separate curved or straight sections which formerly had to be detached or connected each time the direction flow was changed.

The new accessory is said to be available in either spur or Y-switch design for use with 18-inch width wheel conveyor. Both models are constructed so that should it ever be necessary to reverse direction of flow through the switch the change can be made without sending the unit back to the factory. Cases as short as seven inches can be handled on the new device.

Some mills might also be interested in the new platform lift for moving materials from floor to floor where limited space prohibits use of an inclined belt conveyor. This equipment was shown for the first time by Rapids-Standard.

Called a vertical lift, the new platform hoist will raise and lower 800 pounds at standard 15 feet per minute speed, or 300 pounds at 30 feet per minute, according to the manufacturer. Micro limit switches are adjustable to accurately stop the platform at any point in the top and bottom range of travel, it was said.

Standard steel platform size is 24 inches by 30 inches, but smaller and larger models are available. The platform carriage travels on four V-track wheels enclosed in the steel channel side frames. A safety lock prevents the carriage from dropping in the event of cable failures.

Leebow Mfg. Co., Youngstown, Ohio, demonstrated a new series of floor trucks which are assembled by the user and which may be altered to meet changing needs. This was shown for the first time at the materials handling exposition.

The units are shipped knocked-down and may again be disassembled for storage. The manufacturer said that a complete truck may be put together in less than five minutes. End panels slip into sockets in the bottom deck and shelves are added as needed or removed according to specific loads. All parts are replaceable and interchangeable without fas-



## Electrical Apparatus Industrial Supplies

Member  
National Association of Electrical Distributors

### BRYANT SUPPLY CO., Inc.

605 E. Franklin Ave. Phone 5-3466  
GASTONIA, NORTH CAROLINA



NEW METHODS FOR OLD!



Is Your  
Materials Handling  
ACCIDENTAL or ENGINEERED?

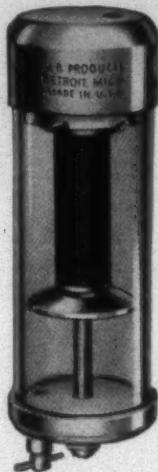


123-125 West 29th St. - Phone 2-5026

CHARLOTTE, N.C.

If You Have  
WATER, DIRT OR SLUDGE  
IN YOUR AIRLINES  
Use the New M-B  
AUTOMATIC  
AIR LINE FILTER

Model W-1



Representatives in  
all textile centers

**M-B PRODUCTS**  
46 Victor Ave.  
DETROIT 3, MICHIGAN

Angular air inlets develop a centrifugal action, abstracting the moisture and throwing it against the wall of the bowl, from where it runs to below the baffle plate, definitely capturing it to be drained. RIBBON TYPE FILTERING UNIT removes solids 10 microns (.00039") and larger. Bowl is transparent plastic; all foreign matter filtered from the air line is visible; no guesswork as to when filtering element should be cleaned or bowl drained. No water, dirt or oil in compressed air that has passed through the filter.

This piece of equipment gives maximum protection to air-operated controls on Slashers and Humidifiers, also Blow-off of the Knotting Device on Barber-Colman Spoolers, also Abbott Winders and Blow-off hoses in Weaving and Spinning Rooms. It affords our "Amoskeag" Pneumatic ROLL PICKER, Model A. V. T. A., or similarly operated equipment, maximum protection.

## MODERN MATERIALS HANDLING EQUIPMENT ENGINEERED TO FIT YOUR REQUIREMENTS

Cleveland Tramrail

Standard Conveyors

E-P Electric Trucks

Barrett Lift-Trucks,  
Portable Elevators

Nutting Floor Trucks,  
Rubber Wheels, Casters

Kewanee Coal Conveyors

DESIGN AND  
APPLICATION  
ENGINEERING

Without Cost or Obligation



MODERN HANDLING PAYS FOR ITSELF

## MAINTENANCE, ENGINEERING & HANDLING

tenings. Sections are slip-fitted so there are no nuts, bolts, pins or washers to fasten.

The trucks are all-steel, welded construction with gray enamel finish. Standard shelves are five-eighths-inch plywood bound with steel angle; steel shelves with one-inch flange, turned up or down, are optional. Over-all dimensions are 22½ by 42 inches. The vehicles have two swivel and two rigid casters with hard rubber ball bearing wheels. All trucks have five-inch casters with a total capacity of 500 pounds. Heavy duty casters are optional having four-inch hard rubber wheel and a capacity of 1,500 pounds.

A new combination hand truck and step ladder with a multitude of applications was introduced by the Fairbanks Co., New York City.

Named the Step-Truck, it is said to be able to function as a hand truck, with curved cross-bars and a solid nose plate, and handles boxes, cartons, kegs and bags. As a step ladder, it leans onto the work. Applications are said to include the use in stores, stockrooms and warehouses where merchandise can be delivered to bins and then stocked in bins beyond reach. It can also be used for a hand truck on delivery trucks where the driver can climb onto the tailboard and after laying out his packages, use the truck to complete the delivery.

Magline Inc., Pinconning, Mich., showed a specially designed hand truck, manufactured entirely of aluminum. The truck weighs but 19 pounds and is said to be rated to handle loads of 450 pounds and more. The manufacturer claims that a comparable steel truck would weigh at least two or three times as much. The device is being used by the Post Office Department, according to Magline representatives.

The forums which were held in conjunction with the National Materials Handling Exposition also brought out heavy interest of pallets of all types, including disposable pallets made of plywood, corrugated paper and similar materials.

Exhibitors at the show also featured pallets designed with ingenuity and among these was a new type pallet, to be marketed under the name of Stak-Mor, and said to increase storage space by as much as 200 per cent and to cut the handling operations in half.

The pallets were said to be suitable for the stacking of crushable items, heavy pieces and irregular sizes that are not normally stacked. It was said that they permit variations of tiers.

A new type of steel and hardwood pallet, assembled entirely without fasteners was introduced here by Econoweld Corp., Dayton, Ohio. The manufacturer claimed that it eliminates costs of maintenance and replacement due to fastener failure.

The steel members of the product consist of three tubular steel skid runners welded to a deck-retaining frame of angle iron which armors the hardwood deck.

Hardwood boards are secured to the all-welded steel structure by two devices: (1) Deckboards are nested in the retaining frame and are clamped in position by a keyboard spring lock. The manufacturer said that the steel-enclosed boards can be removed and replaced—either by hand or by small tools—in a matter of seconds. (2) Bottom boards are individually secured by heavy-gauge steel containers welded to the skid runners. These are said to encase and protect the board ends.

Doors that open without being touched, that stay open as

men and materials pass through, and then close automatically as soon as the passage is clear, were featured by the Stanley Works, New Britain, Conn.

The doors are used in textile mills to help maintain uniform temperature and humidity conditions, and to save time in moving materials from one department to another. The company said that the door upkeep and replacement costs are kept down because trucks do not damage them on the way through.

Stanley displayed two typical applications of these doors. One was a sliding door equipped with pull cord. The other is a swinging door equipped with a photo-electric actuating control.

Dockboards Inc., Milwaukee, Wis., demonstrated a dockboard which automatically adjusts itself to the truck bed without power. The truck is backed into the dock and presses an extended operating lever which lowers the dockboard to the truck bed.

The manufacturer claimed that this simple design eliminates hydraulic or electrical lowering or elevating mechanisms, making installation and maintenance costs low. Several models are available. These include units for installation in new or rebuilt docks, and a new packaged unit built to the specific dock height and shipped ready to operate after hanging the counterweight.

## Du Pont Engineering Department Cited

Technology, if allowed to progress unhampered, can double the living standards of the average United States family within the next 30 years. This is pointed out in "The Builders," a new booklet published by the Du Pont Co. The 32-page illustrated booklet is "the story of the men who build, whose labors have enlarged and widened our civilization." It provides a tribute to the men and women of Du Pont's engineering service in the Du Pont Co.

Established in 1903, the engineering department is an integration of design, research and construction, unique in industrial history. During World War II, this department built 58 military plants for the government. In the post-war years alone, Du Pont engineers, working 36 major projects, erected more than \$800,000,000 of new plant and equipment. New Du Pont plants rose in 12 states, opening their gates to thousands of new employees.

Now, in addition to the company's commercial construction, the booklet points out, Du Pont engineers are designing and building for the U. S. Government the \$1,300,000,000 Savannah River, S. C., atomic materials plant, probably the largest single industrial construction job of all time.

The booklet documents that plant construction today is a complicated business. As science reaches further into uncharted fields, industry's requirements grow continually more complex, its tools more elaborate. For example, with today's transport facilities, earth-moving machinery, and powerful cranes, a crew of modest size could in less than two years duplicate the Great Pyramid, which took the Pharaoh Cheops' 100,000 slaves more than two decades of back-breaking labor to build.

The booklet describes how the recent purchase and installation of a single boiler involved a prime contractor, 300 subcontractors, and 2,500 additional orders. Analysis shows that at Savannah River approximately three-quarters of all purchase orders issued to date have gone to "small business"—firms employing less than 500 people.

## How to renew old reeds

LEFT side of the reed above is shown as it came out of service—right side after 45 minutes of Oakite conditioning. Soil and rust are completely removed without brushing—then a dip in Oakite Special Protective Oil removes moisture, prevents rerusting.

Renew your reeds the mill-proved Oakite way. Ask your Oakite Technical Representative, or write Oakite Products, Inc., 52D Rector St., New York 6, N. Y.



Technical Service Representatives in Principal Cities of U. S. & Canada

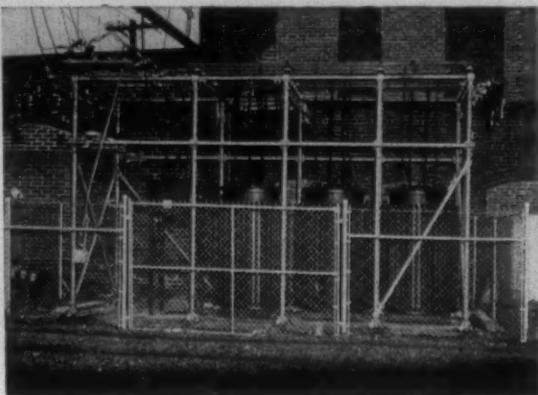


Photo showing Sub-Station structure furnished and installed by Southern Electric Service Company, Inc., Charlotte, North Carolina. This was designed for 2400 volts primary to 600 volts secondary for conversion to 4160 volts, 3 phase, Wye connection primary to 600 volts secondary.

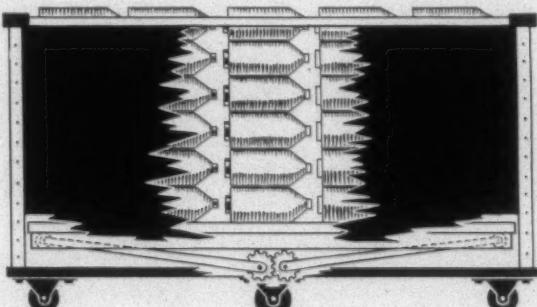
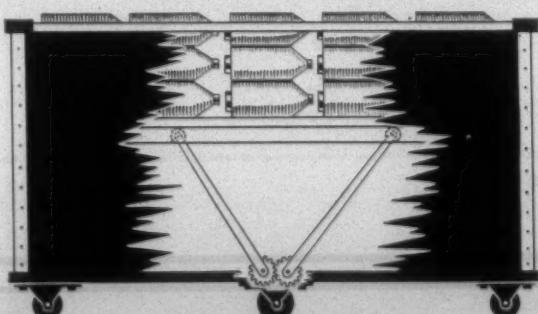
For Highland Park Manufacturing Company, Charlotte, N. C.

### Southern Electric Service Co.

Charlotte • Greensboro • Spartanburg • Greenville

## The "General" No. 3000 Excel Truck with the Auto-Magic Floating Bottom\*

- Completely automatic. Spring action keeps load level always within easy reach of operator.
- Perfect stabilization prevents tilt or bind, always giving smooth level action regardless of position of load in either end or in both ends.
- No bend, no stoop. Eliminates backbreaking straining to reach bottom of truck.
- No cranking, no pumping. Requires absolutely no attention from the operator.
- Mounted rollers in edge of bottom give smooth, free flowing action up and down. Prevents binding or drag against sides and ends of truck.



\*Pat. Pending

### Made in Several Popular Sizes

#### REPRESENTATIVES

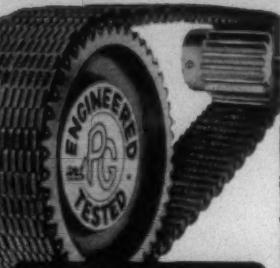
Mr. N. W. Eurey	Lincolnton, N. C.
Mr. Paul Eurey	Lincolnton, N. C.
Industrial Suppliers, Inc.	La Grange, Ga.
Fall River Mill Supply Co.	Fall River, Mass.

### EXCEL TEXTILE SUPPLY CO.

"Excel Trucks Excel"

LINCOLNTON, NORTH CAROLINA

# CHAIN DRIVES



## Largest Stock!

It's all happened in less than 25 years! Remember the "old" PRECISION Compound? The first Chain Drives? —for Drawing, Roving, Sliver and Ribbon Lap, for spinning and twisting, etc., etc.? And do you remember that PRECISION ORIGINATED The First—and practically EVERY CHAIN DRIVE used in the Textile Industry? Thus, when you order from PRECISION, you get CHAIN DRIVES by Experts—from the ORIGINATORS! Call PRECISION—the Pioneer and Producer of Textile's most complete line of Chain Drives—most of them in stock. Or, ask for a Sales-Engineer!

### First by PRECISION (for Textiles)

#### Originated by PRECISION

- Picker • Draw Frame
- Roving frame • Sliver Lap
- Cylinder Jack
- Ribbon Lap • Comber
- Twister • Slasher

**Chain Drives Give You**  
—longer life • highest efficiency • full output  
• more uniform product  
• uninterrupted service  
• shock load capacity,  
true economy—first and last.

Engineers : Manufacturers — Cams : Bearings : Gears : Chain Drives  
DIVISION OF TURNER MANUFACTURING CO.

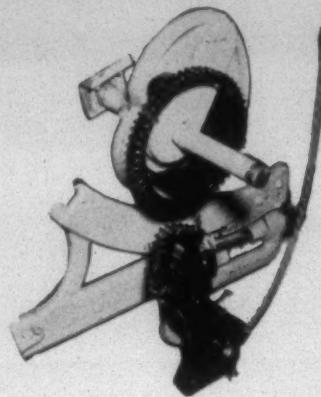


Ph. 4-6857

**PRECISION**  
GEAR AND MACHINE CO.

2001 North Tryon St., Charlotte, N.C.

THE SOUTH'S LARGEST MANUFACTURER OF GEARS AND CHAIN DRIVES



### THE HOLCOMBE WARP BUNCH BUILDER

This Bunch Builder device for a warp spinning frame makes a skill wind at the beginning, laying the first lap on the bobbin so as the tail of the thread will not whip up into the way of the top of the bobbin, breaking down on the last lap. Without this device, a piece of thread is left on the bobbin which is to be wound off or cut off, taking up the time of the operator as well as making imperfections on the bobbin with a cutting instrument which will sooner or later have to be replaced and is also expensive.

We also manufacture an efficient **FILLING FEELER** and **THREAD CUTTER**.

**COLUMBUS TEXTILE SPECIALTY CO.**

COLUMBUS, GEORGIA

THE STARCH  
USED IN A WELL BALANCED  
WARP SIZE  
REFLECTS THE INTEGRITY OF THE PRODUCER  
**CLINTON CORN STARCH**

HAS THE QUALITY WHICH MAKES IT  
A SOUND BASIC INGREDIENT  
FOR

BETTER SIZING  
AND  
WEAVING



CLINTON FOODS INC.  
CLINTON, IOWA

Promotions, Resignations, Honors,  
Transfers, Appointments, Elections,  
Civic and Associational Activities

## PERSONAL NEWS



Mr. Payne

Raymond J. Payne of Charlotte, N. C., has been appointed to serve as sales manager in the states of North Carolina and Virginia for Pioneer Heddle & Reed Co. Inc. and Frank G. North Inc., both of Atlanta, Ga. Mr. North will visit textile plants in the two states from headquarters in Charlotte.

Herman Cone, president of Cone Mills Corp., Greensboro, N. C., was the recipient of the honorary doctor of textile science degree June 7 at commencement exercises of North Carolina State College. . . . J. Spencer Love, chairman of the board of Burlington Mills Corp., Greensboro, was presented an honorary doctor of laws degree by the University of North Carolina at commencement exercises June 8.

John C. Hughes, president of McCampbell & Co., textile selling agency of New York City, has been named by President Eisenhower to be U. S. permanent representative on the North Atlantic Treaty Council. Mr. Hughes also will direct American aid activities in the N.A.T.O. area with the rank of ambassador and will be in charge of the Paris, France, regional office.

David Lindsay has retired as general manager of Spinners Processing Co., Spindale, N. C., after 30 years in that position. He continues as secretary-treasurer of Spinners Processing as well as a member of the board of directors of the parent firm, Johnston Mills Co., and a director of Park Yarn Yarn Mills and Worth Spinning Co. . . . He has been succeeded as general manager of Spinners Processing Co. by John S. Neely, who has been engaged in similar work with another firm at Gastonia, N. C. Mr. Neely is a graduate of the North Carolina State College School of Textiles.

C. A. Knutton Jr. is resigning July 15 from his position as vice-president in charge of the Charlotte, N. C., office of Standard Mill Supply Co. Mr. Knutton has been associated with Standard Mill Supply Co. since 1937.

I. Rogosin has resigned as president of Beaunit Mills Inc. and its subsidiaries and has been elected chairman of the board of each company. H. W. Springorum, who is also treasurer of Beaunit, has been named

president of North American Rayon Corp. and Skenandoa Rayon Corp., two of the subsidiaries, and a vice-president of Beaunit. Mr. Springorum is in charge of the American Bemberg and Coosa Pines, Ala., rayon yarn producing units. . . . Lionel Rogosin has been elected president of Beaunit Mills Inc. and thus becomes chief executive officer of the fabric division of the company and its subsidiaries. Mr. Rogosin, the son of I. Rogosin, has been with Beaunit since 1947 and has been a vice-president since 1951.

. . . The following officers of North American Rayon Corp. and of Skenandoa Rayon Corp. are to be active in the operations of the rayon yarn division of Beaunit Mills, and its subsidiaries: Ben Allen, executive

vice-president; Norman H. Polonsky, vice-president in charge of yarn sales; M. A. Bitzer, comptroller and treasurer, and Hastings W. Baker, secretary and assistant treasurer. The following officers of Beaunit are to be active in the operations of the fabric division: Edward Nufer, vice-president; Frank Bergh Jr., vice-president in charge of fabric sales; Paul Salmony, vice-president in charge of fabric production; H. K. Gregory, assistant treasurer.

Edward P. Ix has been elected president and treasurer of Frank Ix & Sons and related corporations succeeding his late brother, Alexander F. Ix. Mr. Ix formerly was vice-president in charge of planning and



P. HUBER HANES JR. (*left*), executive vice-president of P. H. Hanes Knitting Co. at Winston-Salem, N. C., receives the Kappa Tau Beta "Man of the Year" award from Norman J. Strasberg, president of the North Carolina State College School of Textiles professional knitting fraternity. The presentation was made during the fraternity's annual banquet May 27 at Raleigh.

Mr. Hanes and W. Walker Cantrell, vice-president in charge of manufacturing for P. H. Hanes Knitting, were made honorary members of the fraternity, which was established last year by students at the textile school.

## PERSONAL NEWS

distribution of the company's weaving, spinning and tricot operations. . . Other officers elected were William E. Ix Sr. and Frank Ix Jr., vice-presidents in charge of manufacturing, and Charles W. Ix, vice-president and secretary.

J. Robert Bonnar has been appointed sales manager of the dyestuff division of General Dyestuff Corp.; Henry F. Herrmann, general market manager, dyestuff division; and Donald E. Marnon, manager of the dyestuff technical department. Mr. Bonnar has been



Mr. Bonnar and Mr. Herrmann

associated with G.D.C. since 1935 and just prior to his promotion was manager of the dyestuff technical division. He currently is president of the American Association of Textile Chemists & Colorists. Mr. Herrmann, who is considered an authority on the science of dyeing, is a past president of the A.A.T.C.C. Mr. Marnon joined G.D.C. in May 1951 as assistant to the manager of the dyestuff technical department. He is the inventor of the Marhen process for controlled vat dyeing.

John Reid, head of the acetate sales division of American Viscose Corp.'s Charlotte, N. C., office, is resigning July 1. Mr. Reid has not yet announced his future plans. Mr. Reid joined American Viscose Corp. in 1946 as a sales trainee, and spent a year and a half in the export division and two years in New York district sales before being transferred to Charlotte two and a half years ago as an acetate salesman. Soon

after Norman A. Cocke Jr. was named district sales manager at Charlotte six months ago, Mr. Reid was promoted to succeed him as head of the acetate sales division.

John H. Kemp, for the past year associated with Reeves Bros. Inc. as a fabric development technician, has become associated with American Viscose Corp. in its converting relations department. Mr. Kemp formerly worked for Du Pont as a dyeing and finishing specialist, and also the Rossville (R. I.) Dyestuffs Co.

Russell L. Lawson, formerly vice-president of Utica (N. Y.) Knitting Co., has been named executive vice-president of Central Scientific Co., Chicago, manufacturer of scientific instruments and laboratory apparatus.

Rush S. Dickson of Charlotte, N. C., board chairman of American & Efird Mills, represented Charlotte at a conference on federal-state government relations held June 10 in Washington under the sponsorship of the United States Chamber of Commerce.

William H. Barnhardt of Barnhardt Bros., Charlotte, N. C., was one of two recipients of the Algernon Sydney Sullivan Award recently during commencement exercises at Queens College, Charlotte.

John R. Lyons has been appointed technical representative for the Sindar Corp., New York City, manufacturer of industrial deodorants, fungicides and other items. Mr. Lyons previously was associated with Pacific Chemical & Fertilizer Co. and U. S. Gypsum Co.

Ernest Stewart, public relations manager of the National Cotton Council, Memphis, Tenn., has been promoted to the post of general manager of sales promotion and public relations in charge of the council's New York office. Mr. Stewart succeeds Paul M. Jones, who resigned to become president of the Carpet Institute. . . Other council personnel changes include the elevation of W. L. Foreman of the public relations staff

to public relations manager in the Memphis office, and the transfer of R. T. Alexander of the Memphis sales promotion staff to New York where he will serve jointly in merchandising and foreign promotion relations.

Richard T. Kropf, vice-president of the industrial thread division of Belding Heminway Corticelli, New York City, has been nominated to serve a three-year term on the board of directors of the American Society for Testing Materials. Mr. Kropf has been an active member of the A.S.T.M. for a number of years.

\* W. N. Scroggins has been promoted from overseer of weaving to superintendent of Opelika (Ala.) Mfg. Co. F. N. Moore was promoted from second hand to overseer of weaving and Bennie Hunsinger from loom fixer to second hand. All promotions were effective June 1.



Mr. Bushee

Ward H. Bushee of Greenville, S. C., has been elected a vice-president of Roberts Co. of Sanford, N. C., manufacturer of high-draft spinning frames and change-overs. Prior to Jan. 1 Mr. Bushee was chairman of the carding and spinning committee at J. P. Stevens & Co. and previously for three years he was chief of cotton production in Japan during the American occupation. His other previous associations include American Thread Co. for 22 years, American Yarn & Processing Co. and Bay State Thread Works.

P. D. Merritt has resigned as overseer of spinning at the Spartan Plant of Spartan Mills, Spartanburg, S. C., to accept the superintendence of Dacotah Cotton Mills Inc., Lexington, N. C. . . At Spartan, Mr. Merritt has been succeeded by A. Q. Hatfield, who was transferred from the position



**HIGH QUALITY  
COMBED and  
CARDED  
KNITTING and  
WEAVING  
YARNS  
BEAMS, CONES  
TUBES, WARPS**



**MARTHA MILLS DIVISION, Silvertown, Georgia**

LARGE PRODUCTION . . . UNIFORM QUALITY . . . LATEST MACHINERY

• SOUTHERN SALES AGENTS: **Walter T. Forbes Co.** PHONE L. D. 28, CHATTANOOGA, TENN.

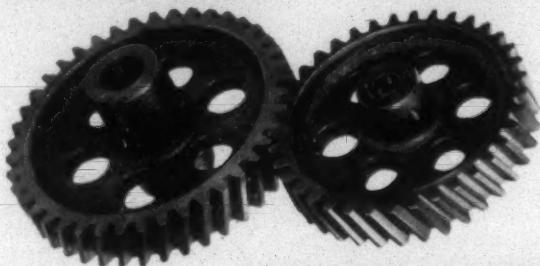
ROLLER CHAIN DRIVES

VEE CORD DRIVES

# Custom Cut GEARS

SILENT CHAIN DRIVES

SPROCKETS SHEAVES



Write For Stock Sheet on Textile Gears.



**FERGUSON  
GEAR COMPANY**  
• GASTONIA, NORTH CAROLINA  
Phone 4-2626

# Sterling Ring Travelers

## YOUR FRIEND

In the spinning and twisting departments, your best friend is the little Ring Traveler. Choose them carefully and be sure to treat them right for a smooth running room. Be Friendly with STERLING.

M. H. CRANFORD  
Box 204, Chester, S. C.

D. R. IVESTER  
Box 392, Clarkesville, Ga.

**STERLING RING TRAVELER CO.  
FALL RIVER, MASS.**

SPECIFY

# KENTEX

FOR APRONS THAT  
FIT BETTER • WEAR LONGER

## Advantages

you get with

## KENTEX APRONS

- 1 Made of finest-quality bark tanned or chrome leather, they're extra durable... do not build up heat.
- 2 Precision-gauged for thickness, width and length—they assure you a better fit.
- 3 Their smooth drafting-surface does not pick up lint, nor catch fine filaments.
- 4 Custom-built on modern precision machinery, to fit your exact requirements.

Made to any specifications on short notice. Write us for free samples and prices.

**TEXTILE APRON COMPANY  
EAST POINT, GEORGIA**

Hugh Williams & Company, Toronto Canada—Canadian Representative

## PERSONAL NEWS

of overseer of carding; Ezelle Sherbert, formerly second hand spinning at Spartan, in turn succeeds Mr. Hatfield as overseer of carding.

Ralph Tanner has been elected a vice-president and director of Mooresville (N.C.) Mills and William W. Rader has been elected treasurer of the company. Mr. Tanner, who has been with Mooresville since February 1950, is co-ordinator of sales and advertising, a post he has held since December 1952. Mr. Rader, who is also a director, formerly was assistant treasurer. Mr. Rader joined Mooresville Mills in February 1951. . . . Frank Poore, a graduate of the School of Textiles at Clemson (S.C.) College, has been named head of the warping, winding, quilling and twisting departments at Mooresville. Prior to joining Mooresville, Mr. Poore was associated with Textron and Dan River Mills.

Edward W. Blackwood has resigned as superintendent of the Efird Division of American & Efird Mills at Albemarle, N.C. Mr. Blackwood was associated with Burlington Mills Corp. before joining American & Efird 3½ years ago. He will announce his future plans shortly.

Bertram J. Garceau has been appointed assistant research director of Arnold, Hoffman & Co. Inc. Mr. Garceau, a graduate of the University of Rhode Island, joined the research department of Arnold, Hoffman &

Co. in 1943 and has been section leader of product and process development since 1948. He will be in charge of the company's research laboratory in Providence, R.I. . . . Warren L. Wurster has been appointed works manager of the firm's Harkness & Cowing Division, with responsibility for operations at the plant at Cincinnati, Ohio. Mr. Wurster joined the Harkness & Cowing Co. in 1939 as chemical engineer and continued in that capacity after the latter was acquired by Arnold, Hoffman & Co. in 1948. Mr. Wurster succeeds Clarkson C. Taylor, who is retiring from active service with the company on July 1. Mr. Taylor will continue his association with the company in an advisory capacity.

W. H. Barnhardt of Barnhardt Bros., Charlotte, N.C., was elected a director of Gulf Life Insurance Co. at the company's recent annual meeting in Jacksonville, Fla.



Mr. Potter

J. Robert Potter recently was elected vice-president of Lockwood Greene Engineers Inc., internationally known firm of architects and engineers, founded over a hundred years ago. This firm has long been engaged in the design of some of the largest manufacturing plants in the United States and abroad, including many textile plants. Mr. Potter came with the company

in 1939, became a director in 1951, and manager of the Boston office in 1953. He is a 1930 graduate of Penn State and served in the Navy during World War II.



Mr. English

James C. English, formerly associated with the Malina Corp., New York, is now with the sales department of Hoffner Rayon Co., Philadelphia, Pa. Hoffner Rayon Co. produces skeins, cones, tubes, cops and spools, and performs reeling and twisting operations for hosiery and weaving mills.

George H. Lanier Jr., president of Lanier Textile Co., and George W. Walker, president of Neuss Hesslein & Co., have been elected to the advisory board of the textile office of Chemical Bank & Trust Co., New York City.

James W. Coleman has been named production superintendent of the Covington, Va., plant of Industrial Rayon Corp. Mr. Coleman succeeds George M. Williams, who was transferred to the company's main office in Cleveland, Ohio, to take over the post of assistant industrial engineering manager for the company.

Harry Gallimore Jr. has resigned as veterans' employment representative in the Hickory, N.C., office of the North Carolina Employment Security Commission to become manager of the Huntersville, N.C., branch plant of Carolina Mills Inc.

Walter S. Montgomery, president and treasurer of Spartan Mills, Spartanburg, S.C., has been elected a director of Piedmont Natural Gas Co. Inc., Charlotte, N.C.

Luther H. Hodges, lieutenant governor of North Carolina and a former well-known textile executive in that state, was elected a director of Rotary International at the group's recent convention in Paris, France.

Robert L. Gross has been promoted from senior tester to assistant testing engineer in the research division of Callaway Mills Co., LaGrange, Ga.

Paul A. Fodor Jr. has been sworn in as chief of the inorganic and agricultural chemical branch, chemical division, National Production Authority. Mr. Fodor, district sales manager at Philadelphia for Columbia-Southern Chemical Corp., is on leave from the corporation during his temporary services with the government.

Albert G. Myers, chairman of the board of Textiles Inc., Gastonia, N.C., has been made an honorary member of the Duke University Chapter of Omicron Delta Kappa, men's national leadership honorary fraternity.

Emil O. Johnson, assistant manager of the Kinston, N.C., plant of E. I. du Pont de Nemours & Co., will become manager of the firm's nylon unit at Seaford, Del., effective June 1. Russell W. Peterson, technical superintendent, will be appointed assistant plant manager of the Kinston plant, replac-

**BRIDGE**

it's the "heart of the hide"

CHECK STRAP  
Guaranteed to outlast  
all others . . .

Estab. 1880  
Mfrs. of:  
Leather Belting  
Check Straps  
Binding Straps  
Textile Leathers

Red record cards  
are shipped with  
each order — to  
prove longer life.

BRIDGE "heart of the hide" CHECK STRAPS are guaranteed to outlast all others because they are made from only heart of the hide leather . . . the finest there is . . . heavy center cut steer hide, specially pre-stretched. ALL BRIDGE Check Straps are cut to your exact measurements.

ORDER A TRIAL LOT — CHECK FOR YOURSELF

JOHN BRIDGE SONS

9th & Pennell Streets

Chester, Pa.

Send us a trial order of ..... quantity BRIDGE hair on "heart of the hide" Check Straps, of the following dimensions—

Length ..... " Width ..... " Thickness ..... " Size of slot .....

Name .....

1/4"

Company .....

Check which

Street .....

9/32"

City .....

State .....

ing Mr. Johnson. Robert E. Wilfong will be transferred from the nylon research division at Wilmington to the Kinston plant as technical superintendent.



Mr. Born

Robert H. Born recently joined the sales department of the Chemstrand Corp. and is headquartered in the firm's New York sales office engaged in selling Acrilan acrylic fiber and the forthcoming Chemstrand nylon. Mr. Born has been associated with several leading textile firms and since 1949 has worked for Greenwood Mills Inc. in charge of military procurement of synthetics. His other previous associations include Traub-Lyons-Oppenheim Inc., Scheuer & Co., Deering, Milliken & Co., and I. C. Isaacs.

Richard S. Thomas has been appointed plant manager of the Le Moyne, Ala., plant of Courtaulds (Alabama) Inc. Mr. Thomas has been elected vice-president in charge of operations of the corporation. He has been with the Courtaulds organization for the past 25 years and comes to this country from Carrickfergus, Northern Ireland, where he was manager of the Courtaulds plant there.

Brig.-Gen. Letcher O. Grice, who became well known to members of the textile industry during 42 years of service in the

textile and apparel sections of the Quartermaster Corps, will retire from his command of the Jeffersonville, Ind., duck and webbing pool on July 31.

William O. Allison, who joined Reeves Bros. Inc. Feb. 1, has been appointed comptroller of the firm, with headquarters in New York City.

W. H. Muse, since 1926 assistant manager of the Erwin, N. C., plants of Erwin Mills Inc., retired from that post June 1. Mr. Muse is a veteran of about 46 years in the textile industry, having joined Erwin in 1907 as a clerk.

Basil D. Browder, executive vice-president of Dan River Mills, Danville, Va., recently was elected vice-president of the Virginia State Chamber of Commerce for Southside Virginia.

Ronald R. Menti has been appointed assistant to H. Gordon Smith, executive vice-president of United States Rubber Co. Mr. Menti formerly was supervisor of employee relations for the company's textile division. He started with U. S. Rubber in 1948 and has held several positions in the textile division, including assistant to the manager of industrial relations and labor standards. . . . W. O. Jelleme, assistant merchandise manager of the division, has been placed in charge of market research for the company's present and planned industrial fabrics. Mr. Jelleme will continue his supervisory responsibilities for economic analysis, in which he will be assisted by Charles G. Anderson. R. A. All, who has been in charge of industrial relations and labor standards for the division for the past eight years, will become assistant to the merchandise manager. Mr. All joined U. S. Rubber in 1937 at the Hogansville, Ga., plant and was transferred to Winnsboro, S. C., in 1938 and to the general offices in New York in 1944. J. A. Arrouet, who has been fabric development engineer, will now be responsible for basic fabric and product development. He has been in the textile field since 1929 and joined U. S. Rubber earlier this year. Mr. Arrouet attended the Philadelphia College of Textile Engineering and was graduated in 1929 from Ecole de Commerce, Lyons, France. . . . Joseph F. Hartman has been appointed consumer fabrics sales representative for the Philadelphia and Baltimore areas, with headquarters in the textile division's new office located at the U. S. Rubber branch in Philadelphia. Mr. Hartman has been affiliated with the textile business for 13 years, the past four years as Philadelphia sales representative of the J. W. Valentine Co. He will handle the sale of U. S. Royal fabrics in eastern Pennsylvania, southern New Jersey, Delaware and Maryland. C. F. Cline Jr. will be consumer fabrics sales representative for the Southeastern states, with headquarters at the company's branch in Atlanta. Mr. Cline has been with U. S. Rubber for 17 years, with positions at company plants in Winnsboro, S. C., Shelbyville, Tenn., Passaic, N. J., and New Bedford, Mass. Recently he was textile specialty sales representative for the company's mechanical goods division, working out of Atlanta.



## GREENSBORO ANTI-RUST REED OIL

This is an oil prepared for the express purpose of preventing rust on reeds and heddles. It is very thin, having slightly heavier consistency than kerosene. When applied it dries quickly forming a very thin film of protecting wax over the surface of the steel. This is the ideal rust preventative for wiping off reeds when storing away. A gallon will last a long time, and save a lot of reeds. Directions for using are on the can.

LOOM REED CO., INC.  
GREENSBORO, N. C.

# MILL NEWS

**LAURENS, S. C.**—An expansion and modernization program now underway at Palmetto Worsted Mill will more than double the size of the plant, from 10,000 to 21,000 square feet, and entail the expenditure of about \$75,000 for new machinery and equipment. At present Palmetto has about 70 full-time and part-time workers, to be increased to about 125 upon completion of the expansion program.

**ROXBORO, N. C.**—Wamsutta Mills of New Bedford, Mass., has agreed to acquire all of the outstanding preferred and common stock of Somerset Mills of Roxboro, it is announced by Wamsutta President Joseph H. Axelrod. Acquisition of Somerset will enable Wamsutta to establish its own towel manufacturing operations in the South. Details regarding the amount involved in the transaction were not disclosed.

**JEFFERSON, S. C.**—A new bleachery and dye plant is to be constructed in Jefferson by Clover (S. C.) Spinning Mills, it is announced by Cary Boshamer of Gastonia, N. C., president. Construction is scheduled to begin upon approval of the State of South Carolina on the methods of waste disposal for the plant. The new plant will bleach and dye knitted fabrics, cotton and synthetic yarns. It will be equipped to handle 100,000 pounds of cloth and 50,000 pounds of yarn weekly.

**GREENVILLE, S. C.**—Southern Pile Fabric Co. and Brookline Fabrics Inc. have been merged. The new corporation is Brookline Fabrics Inc.

**GREENVILLE, S. C.**—Belrug Mills Inc. has let contract to the Daniel Construction Co. of Greenville and Birmingham, Ala., for a new one-story plant for the weaving of its well-known line of cotton carpets. This L-shaped building, 302 feet long by 261 feet wide, will house complete facilities

for weaving and finishing of carpets from 24 inches to 12 feet in width. The steel frame brick wall building has a steel roof deck with 20-year built up tar and gravel roof. A partial basement provides space for boiler room. One section of the plant is devoted to a latex machine for coating the backs of the carpets. Facilities are included for complete warp preparation, weaving, finishing and latex coating of the cotton broadloom carpeting. Cost is reported to be in excess of half a million dollars, including equipment.

**ROCKY MOUNT, N. C.**—Robbins Mills Inc. is suspending operations at its plant here which produces men's suiting and outerwear materials. Robbins acquired the Rocky Mount plant last August. When operating at capacity 115 persons were employed in the 41,000 square foot building.

**WILSON, N. C.**—Productive machinery of Sheppard Mills Inc., Manayunk, Pa., purchased recently by Sidney Blumenthal & Co. Inc., is to be moved to Blumenthal's Wilson facility. The machinery includes 43 W-3 looms with appropriate preparatory equipment.

**GREENSBORO, N. C.**—An expansion program at Southern Webbing Mills, costing about \$225,000, is nearing completion. Approximately 4,000 square feet of floor space is being added on two floors to provide room for 12 new looms, which are expected to increase capacity by 15 to 18 per cent. The entire plant is being air conditioned.

**LOWELL, N. C.**—Construction is now underway on an addition to the picker room at Peerless Spinning Co. here. The building will be 25 by 100 feet, will cost about \$12,000, and will be used to house new one-process picking units.

**SPARTANBURG, S. C.**—Installation of 120 new 60-inch Draper XP looms is scheduled to begin at Beaumont Mills as soon as

space can be provided in the weaving department. The new looms will be installed in the No. 5 weave room on the ground floor of No. 1 Mill. Beaumont is a division of Spartan Mills.

**WASHINGTON, N. C.**—National Spinning Co. of New York recently announced plans for construction of a new plant on a 40-acre tract near here. The plant, with an anticipated employment of 500 to 600, will produce woolens and synthetic yarns. It is scheduled to be in production sometime during 1954. The full investment, when the plant is completed, is estimated at \$4,000,000.

**CLEVELAND, GA.**—Ames Stevens, president, Ames Textile Corp. of Lowell, Mass., has announced that his company will build a new 70,000 square foot, two million dollar woolen worsted, spinning and weaving mill at Cleveland. The McPherson Co., Greenville, S. C., engineers for the new project, said that the new mill will be a modern, windowless type, with air conditioning and new machinery throughout. The McPherson Co. design includes plans for future expansion, to include space for a finishing operation. Construction of the two million dollar project will begin soon and Mr. Stevens expects to be in full operation by early 1954. The Ames Textile Corp., in addition to its main plant at Lowell, Mass., has plants in Southbridge, Mass., and Richmond, Me. The same interests operate a Southern textile plant in Chattahoochee, Ga.

**SEVIER, N. C.**—The new American Thread Co. finishing plant at Sevier has been equipped with new mercerizing machinery which will process more than 1,800 pounds of yarn per hour. New large package quillers which handle up to 20 ounces per bobbin have also been installed. New design equipment has been purchased for electrically singeing the thread, waxing and winding to cones in one operation. The few machines from ATCO's Kerr Mill which were moved to Sevier were completely overhauled and modernized before being installed. Operations are now underway and the new, modern equipment is credited with simplifying production and increasing plant efficiency. Harvey Eastman, plant manager, expects the Sevier operations to reach full capacity in about a month. The dedication of the new plant is scheduled for June 30. ATCO's Sevier output includes industrial and domestic spinning and weaving yarns and a



**TEXTRON TRICOT PLANT NEARING COMPLETION**—The multi-million dollar throwing and tricot plant being built at Williamston, S. C., for Textron, by Daniel Construction Co. of Greenville, S. C., and Birmingham, Ala., is nearing completion. This project, providing a complete new plant near the synthetic weaving plant at Williamston, is one of several plants that Textron has added to its manufacturing chain during the past two years.

**FRANK G.  
NORTH**  
INCORPORATED  
**MANUFACTURING CHEMISTS**

Atlanta, Ga. • P. O. Box 123, Sta. A • Phone RAYmond 2196  
Marietta, Ga. • P. O. Box 92 • Phone Marietta 9-4323

The Nation's largest manufacturer of Sizing Compounds,  
Gums, Waxes, and other kindred products for all warp yarns.

## CASTERS

VERY BEST IN QUALITY  
EASY ROLLING, RUNS SO FREE  
SAVES YOUR FLOOR  
COSTS NO MORE  
ORDER NOW FOR PROMPT DELIVERY



District Representatives for  
DIVINE BROTHERS CO.  
Casters and Wheels

**V**esco  
inc.

MATERIALS HANDLING EQUIPMENT  
5023 Wilkinson Blvd. — Charlotte, N. C.  
Ask for Your Caster & Wheel Catalog

Call on us for Quick Service

on:

**RING HOLDERS  
BOBBIN SHAFT GEARS  
BOBBIN GEARS  
SPINDLE SHAFT GEARS**



Kluttz Machine and Foundry Company  
P. O. Box 71, Gastonia, N. C. • Telephone 5-3921

## TEFLON COATING

of Slashing and Finishing Equipment

No Adhesion      No Corrosion

**ELECTRIC FURNACE CORP.**

P. O. Box 4073  
CHATTANOOGA 5, TENN.

P. O. Box 8282  
CHARLOTTE 8, N. C.

"What You Want"      "When You Want It"



## WONALANCET

### Cotton Waste Fibres

for Spinning, Felting,  
Batting, Wadding

for Shipment from New England  
and Southern mill points

Uniform as to grade, staple, color and character. Free  
from variations in quality of lot to lot shipments.  
Available from stock in any quantity at all times.

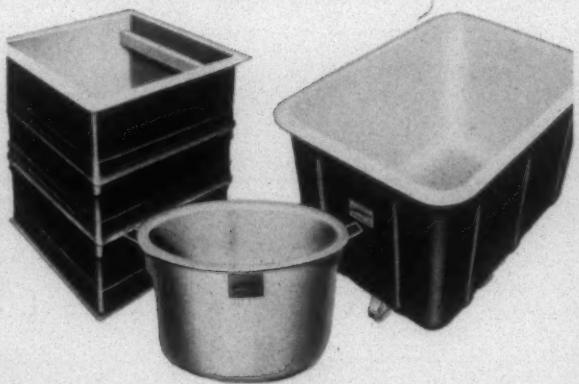
### WONALANCET COMPANY

153 Peachtree St., Atlanta, Georgia

Mill and Main Office:  
128 Burke St., Nashua, New Hamp.

## LAMINEX

### FIBERGLAS PRODUCTS CUTS COST AND LABOR!



Distributors In

The South and New England

**UNITED STATES SUPPLY CO.**

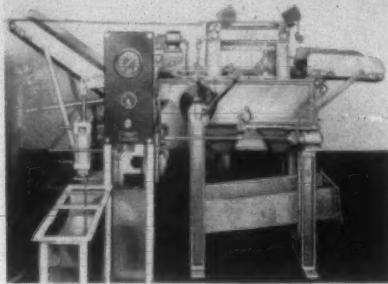
Rockingham, N. C.

East Providence, R. I.

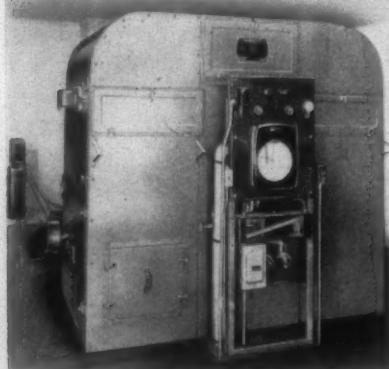
# For the Textile Industry's Use

## EQUIPMENT - SUPPLIES - SERVICES - LITERATURE

### Sargent Lab Twins



Recognizing the problems new fibers would bring, C. G. Sargent's Sons Corp. designed and built a pilot model washer and extractor in co-operation with Lowell Textile Institute's research laboratory. Originally designed to track down and measure textile fiber processing sources of stream pollution, the washer soon suggested many applications other than showing the economically sound way to waste-recovery. Scouring, bleaching, acidifying of raw stock; shrinkage measurements and control; dye fastness and penetration tests; wetting out time; detergent and chemical solutions and their effectiveness on various fibers and blends—all these and many other processes have been tested and production routines established through use of this economical, practical, junior size washer.



A logical companion to the Sargent Junior washer is the new Junior dryer. Starting with the versatile all-industry dryers designed for Sargent's drying research laboratory, Sargent engineers came up with a pilot model dryer for textiles that incorporates all possible features for determining the one best, economical production method for drying any given fiber or fabric.

Both Lab Twins, as they are called, have complete control and recording instrumentation. They are said to reproduce any factor or combination of factors entering into these all-important phases of textile processing. Mills are using them to develop new

methods of handling new blends as well as establishing better methods of handling the older fibers. The entire process cycle, once determined on the Lab Twins, is transferred quickly and easily to the regular production line with complete confidence in the result.

Simple in design and operation, so that the smaller mill does not need additional trained personnel, the Sargent Lab Twins are also versatile and thorough enough to meet the most exacting demands of highly-trained laboratory technicians. Economical of space, operating as a unit or separately, they are claimed to save many times their cost by eliminating guesswork in modern textile processing. (Request Item No. F-1)

long covering 24 lines of the main scale. It has been found by extensive use that this results in easier, more accurate readings eliminating eye strain. A new gib construction of slide with hardened self lubricating phosphor bronze spring gib, accurately machined and fitted into the narrow upper side of the slide has been added. Two adjusting screws are provided for taking up any wear and assuring squareness of the measuring jaws. The measuring surfaces are lapped to perfection. Fully illustrated catalog showing the complete line of Mauser calipers, height gages, toolmakers calipers, tool stands and bevel protractors can be obtained from the George Scherr Co. Inc. or on request to this journal. (Request Item No. F-3)

### Material Handling Booklet

The vital subject of material handling is the theme of the third issue of "Industry Ideas," a new publication developed in the interest of business and industry improvement by the consulting engineering firm of Wheeler Associates Inc.

The new issue contains four valuable cost-cutting ideas on material handling. Also included is a material handling check list designed to aid plant personnel to evaluate their own handling system. Under such section headings as labor, materials, equipment and costs are such fact-finding questions as "Do skilled operators or assemblers waste time handling materials?", "Where is material placed in relation to operator and operation?", "Do you have production delays due to poor delivery and removal?", and many others. In all, 30 questions are posed in the check list.

"Industry Ideas" also contains details of the Wheeler cost reduction manual, its contents, its objectives, and how it may be obtained. Information is also offered on the Wheeler executive development training program. Copies of "Industry Ideas" may be obtained by writing Wheeler Associates Inc. or this publication.

(Request Item No. F-2)

### Improved Mauser Caliper

The George Scherr Co. announces an important change in Universal Mauser Vernier caliper for inside, outside and depth measurements, which so far has been furnished in chrome steel only. The well known No. 64 is superseded by the new Model No. 101, retaining all important features but with these improvements: material is now entirely stainless steel, rust and tarnish resistant, containing 14 per cent chrome steel, proven by test to be most suited for measuring tools with sliding movements.

The entirely new long Vernier with 25 lines covering 49 graduations of the scale is more than double the size of the former type which is only five-eighths of an inch

### G.E. Tension Brakes



Two new magnetic tension brakes of the hysteresis type have been announced by the General Electric Co.'s control department. With torque ranges of 0.4 to 4.0 and 2.0 to 14.0 ounce-inches, the new units supplement the company's original brake which has a torque range of 0.1 to 0.5 ounce-inches. Designed to provide constant tension and thus reduce abrasion and excess flexing of synthetic and natural yarns as well as rubber, glass fiber, and wire, the larger sizes of the new brakes make them particularly adapted for use on a loading device where constant torque is required.

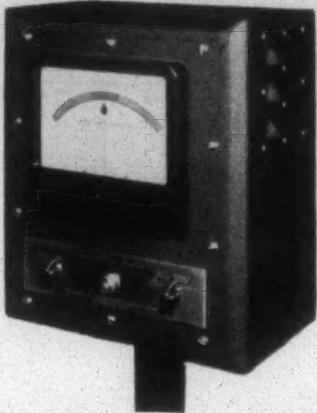
Approximately two and three inches in diameter and weighing about three-quarters and 2½ pounds, respectively, the brakes have a speed range of 0 to 1,500 r.p.m. Although no pulley is supplied as with the smaller brake, torque adjustment is the same. Turning the calibrated aluminum magnet housing decreases or increases the torque of the brake by altering the distance between four Alnico magnets and a hysteresis ring. The brake holds stalled tension by a tendency to reverse direction of rotation for a few degrees after decelerating to a standstill.

Because the braking action is provided

by a magnetic field, there are no rubbing parts to wear and the unit will retain the required torque unaffected by lint, moisture and heat, according to G-E engineers. All brakes are calibrated before shipment and will hold constant torque almost indefinitely unless disassembled or subjected to a strong external magnetic field, they said.

(Request Item No. F-4)

#### M-100 Moisture Monitor



Strandberg Engineering Laboratories has made available to the industry an eight-page leaflet, perforated for easy filing and reference, describing its Model M-100 moisture monitor.

According to the leaflet, the Model M-100 moisture monitor is designed to provide general performance information relative to slasher operation. Calibrated in terms of three conditions of moisture (dry, normal, wet) it can be used to provide immediate and positive indications of laps, blanket defects, other troubles in squeezing, resultant wet streaks, or anything which would cause a disruption in the smooth flow of the warp.

The instrument is designed for continuous operation and is provided with convenient means for testing from the front panel, thus eliminating the need for routine maintenance.

Further details concerning the M-100 moisture monitor may be obtained on request to Strandberg Engineering Laboratories or to this publication.

(Request Item No. F-5)

#### Hankison Liquifeeder

A new gravity-type liquid feeding device, embodying a new patented principle of control, has been developed by Hankison Corp. Known as the Liquifeeder, it maintains a constant rate of feed, and is adjusted by a valve that meters the air admitted to the supply tank. There is no restrictions to the flow of liquid, yet the feed can be varied from less than one-half pint a day to more than 500 gallons a day. Each Liquifeeder includes a combination sight glass and bubble-type flow meter. The rate of liquid feed is indicated by the bubble frequency in the sight glass.

Liquifeeders can be constructed of material to suit specific fluids. All parts subject to corrosion are made of stainless steel with teflon gasketing. Liquifeeders can be made

## WANT SOMETHING?

## ADVISE US, IF YOU—

- ¶ Need further information about new products described in this section.
- ¶ Desire copies of free literature described in this section.
- ¶ Want additional facts about items or services advertised anywhere in this issue.
- ¶ Require clarification of or comment on any matter discussed in a technical article.

*Then, use the coupon below to advise us of your wants. Be sure to fill in your company's name and your position on the coupon, along with proper address.*

June 1953

Reader Service  
TEXTILE BULLETIN  
P. O. Box 1225  
Charlotte 1, N. C.

Please send me further information and/or free literature described in the following item(s) carried in the "For The Textile Industry's Use" section (list key numbers that appear at end of each item): \_\_\_\_\_  
\_\_\_\_\_

Please send additional information about the following products, services or subjects advertised or discussed in this issue:

PAGE NO. SUBJECT: \_\_\_\_\_

PAGE NO. SUBJECT: \_\_\_\_\_

PAGE NO. SUBJECT: \_\_\_\_\_

PAGE NO. SUBJECT: \_\_\_\_\_

Your Name: \_\_\_\_\_ (Print or write legibly)

Your Title: \_\_\_\_\_ Mill: \_\_\_\_\_

Street: \_\_\_\_\_

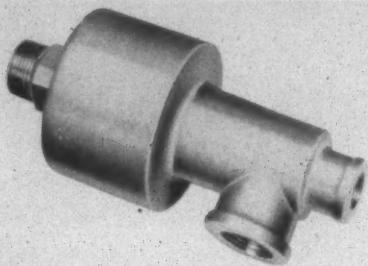
City: \_\_\_\_\_ ( ) State: \_\_\_\_\_

## FOR THE TEXTILE INDUSTRY'S USE—

in any size required by the user, and range from one quart to hundreds of gallons. Price is determined by size and material. The Liquifeeder is ideally suited to batch-type processes. It is used for treating water in cooling tower systems, acid feeding for bleaching, perfuming, blending, or wherever a constant gravity feed of liquids is needed. For further details on the Liquifeeder, write to Hankison Corp. or this journal.

(Request Item No. F-6)

### Anco Rotary Joint

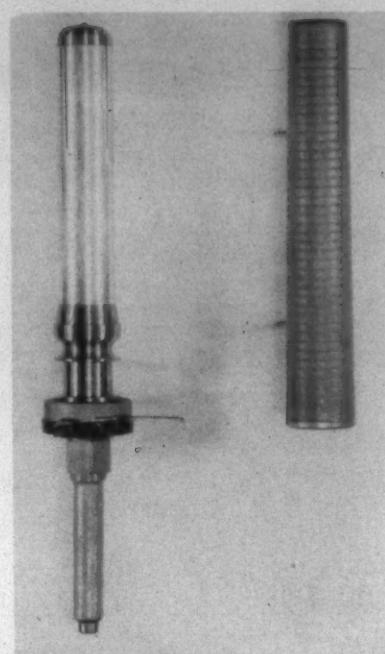


For textile finishing plants in its Southern territory, Marshall & Williams Sales Corp. will supply the new Anco rotary joint. Continuous trouble-free operation is said to be characteristic of this joint in any application requiring steam to be conveyed under pressure between stationary and revolving units. The Anco low pressure rotary

steam joint conveys steam under pressures up to 350 psi in continuous operation for exceptionally long periods, without interruption by shut-downs for servicing.

Maintenance on the job is simple, because the Anco joint consists of only 14 parts, including all washers, oil rings, etc. It is self-aligning, equipped with a self-adjusting wear take-up, and is leak-proof whether hot or cold. The self-lubricating rotary seal and its mating part are so designed that no misalignment or eccentricity up to ten degrees can affect the efficiency of the sealing members. A syphon adaptor is an integral part of the Anco low pressure steam joint, which is designed for use either with or without a syphon. The Anco joint is self-supporting, needs no external braces, and can be rotated at high speeds.

Marshall & Williams products to be supplied by the new distributing organization include the M. & W. high-speed tenter frame, batchers, let-off stands, swing plaiters, and a complete range of tenter clips. Also available are M. & W. tenterettes, or short tenters, which are a Marshall & Williams exclusive. Early addition of more new lines to the range of Hunter, Anco and M. & W. products now ready for distribution is predicted. (Request Item No. F-7)



is equipped with a special foot step damping device that requires lubrication about every two years. The bobbins are positively driven by centrifugal force and are evenly coated throughout the length of the frame. The spindle also has a finger-operated brake which stays on until released, making piecing up easier for the frame operator.

No important changes are necessary on present spooling, dressing and winding equipment to accommodate the new bobbin, the company states. It will take a package with an over-all length of 13 inches and traverse of 12 inches. The yarn content, ranging according to sizes and types, runs from approximately 19 ounces to 26 ounces. The company declares this means approximately 50 per cent more yarn than is usually wound on standard wooden bobbins; also greater freedom from knots, larger intervals between doffs and thus an increase in frame efficiency as well as an opportunity for greater spindle assignment.

(Request Item No. F-8)

### more from your peroxide with...



You can rely on improved bleaching action from every pound of peroxide because:

- ★ Star is specially purified silicate permitting even Oxygen release.
- ★ Star has reserve alkalinity to compensate for any acid conditions which may arise during the bleaching process.

Use Star in your bleaching system to save money. Write today for prices in drums and tank cars.



**PQ Silicates of Soda**  
METSO DETERGENTS

PHILADELPHIA QUARTZ CO. • 1139 Public Ledger Bldg., Phila. 6, Pa.

forms, drives, sidewalks, to water-proof, to stucco and plaster walls and as a concrete wherever vibration is a problem. Surco can be applied directly and without special preparation to metal decks, stairs, pipe joints and coverings. With the addition of colors and marble chips a terrazo type of ornamental flooring is obtained at far below present costs. (Request Item No. F-9)

#### Hartopon Conc.

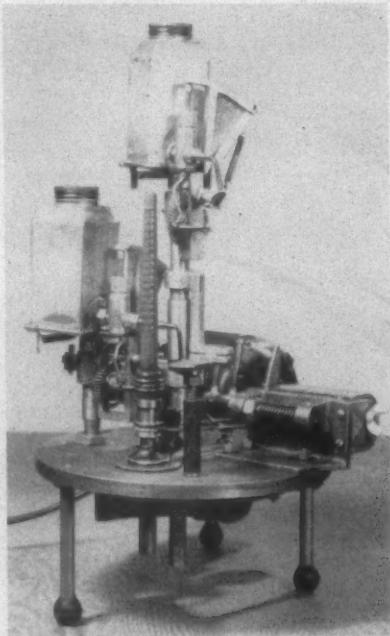
Hart Products Corp. is marketing "Hartopon Conc.," a highly-concentrated member of the new Hartopon series of detergents now being offered. This product is a cream white colored paste which is said to display excellent detergency, wetting and sudsing action. Chemically, it is classified as a fatty sulfate of approximately 40 per cent active content.

Hartopon Conc. is recommended by the manufacturer for use in most textile cleaning operations such as the scouring of cotton, rayon, acetate, wool, silk, nylon, Orion and Dacron. It is pointed out that Hartopon Conc. is stable in the presence of reducing and oxidizing agents, reduces the harshening effect of vigorous scouring procedures and possesses outstanding protective action and dispersing powers.

Hartopon Conc., as outlined by Hart Products, is effective in very low concentration because of its high activity. It is said to display thorough cleaning, rapid and complete rinsing in hard or soft water and is exceptionally low in cost.

(Request Item No. F-10)

#### Bobbin Painter



A bobbin tip and base painting machine for identification of yarn numbers has been made available to textile mills by D. A. Jolly of 202 Venus Drive, Kannapolis, N. C. The machine can be set up to operate for tip and base painting at the same time, as well as for tip or base painting separately. It also can be built for one operation only, if desired. The machine weighs ap-

## ROTARY UNION

(REG. TRADE MARK)

a  
revolving  
steam  
connection

PIPE SIZES

1/4" THROUGH 3"

TYPE "S" ROTARY UNION

The Most Compact  
Most Economical  
Longest Lasting  
revolving steam joint you can buy

The ROTARY UNION needs no complicated piping or brackets and can be installed in a few minutes . . . furnished complete with high-pressure metal hose connections . . . it provides a perfect seal under difficult conditions, requires no mechanical maintenance, and eliminates down-time due to sealing failures . . . and many ROTARY UNIONS have been giving sealing service for over three years on slashers, dry cans, calenders, embossers, and printing and coating machines without a leak.

Contact any of our offices for additional information or engineering consultation or write Dept. 6B for our catalog.

"Where Good Connections Count" ®

## PERFECTING SERVICE COMPANY

332 Atando Avenue (Home Office and Factory) Charlotte, N.C.  
Atlanta, Chicago, Cleveland, Philadelphia, Providence, New York, Montreal, Toronto

## FOR THE TEXTILE INDUSTRY'S USE—

proximately 40 pounds and is approximately 24 inches high. The painting mechanisms are adjustable up and down for any length bobbin.

(Request Item No. F-11)

## New Acetate Fiber

Celanese Corp. of America announces that it has begun production of a new ribbon-like acetate staple fiber of 35-denier per filament for blending in yarns going into heavy fabrics such as suitings and home furnishings. This new product, heretofore not made in the United States, gives effects which are attracting favorable attention in European designed fabrics. The fiber will be made available in various lengths as well as in tow form. It is being produced at the Celanese plant in Narrows, Va. Used primarily as a decorative influence, the new fiber imparts a fleck effect and sparkle to fabrics. When cross-dyed, it adds eye-appeal, and when piece-dyed gives textural appeal.

(Request Item No. F-12)

## Bulletin On Drives

A new four-page bulletin on drives specifically designed for Saco-Lowell SG-1 Gwaltney spinning frames has been announced as available from the General Electric Co. Designated GEA-5890, the well-illustrated, two-color publication discusses general design features and specific advantages of G-E drives using totally-en-

closed textile motors of both fan-cooled and water-cooled constructions and combination motor starters. Cutaway views of the motors highlight the benefits of the drive equipment.

(Request Item No. F-13)

## Iron Fireman Folder

A new four-page, three-color folder on gas and dual-fuel firing for heating, processing and power (form 2359) has been issued by Iron Fireman Mfg. Co. Emphasis is laid on the advantages of zone fire control for low start and modulated firing permitted by the Iron Fireman vertical gas burner, on the features of the "inshot" type of burner with its efficient radiant heat, on ring-type burners designed for intermediate and high pressure gas, and on the recently announced dual fuel (gas and oil) package unit combining the radiant gas burner with the Iron Fireman gun-type commercial oil burner.

(Request Item No. F-14)

## Hard Facing Booklet

The subject of hard facing, a production method used to lower maintenance and replacement costs, is presented in a colorful four-page booklet published by Cleveland Hard Facing Inc. It describes the method of applying hard alloy metal to a low alloy steel base at areas of wear to hold down production costs on original equipment. It illustrates how operating life of worn equipment is increased by the proper and economical application of hard facing.

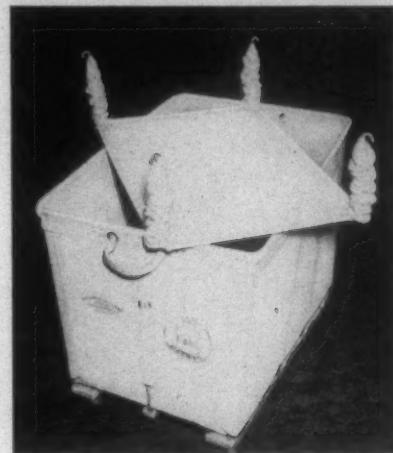
Hard facing alloys are now applied to

lineal, cylindrical or contoured shapes to provide excellent anti-corrosive characteristics, increased operating life, resistance to high temperature, impact and abrasion. The colorful, profusely-illustrated free literature contains photographs and descriptive data illustrating the types of products hard faced and the industries served.

Copies of this informative booklet may be obtained by writing Cleveland Hard Facing Inc., or this journal.

(Request Item No. F-15)

## Lane Automatic Lift



A false bottom, offered by W. T. Lane & Bros. Inc., automatically keeps work at rim-level of canvas trucks, canvas baskets and hampers. Called Automatic Lift, the false bottom is suspended from the rim of the container by tension springs. When work is loaded into the basket, the false bottom descends; as work is taken out, the bottom rises. The worker does not have to bend over and reach into the basket to empty it. This low-cost labor saver is especially suited for operations where baskets and trucks are frequently loaded and unloaded.

Platform of the removable lift is a canvas-colored, tempered steel frame. To prevent snagging or pinching of fabrics, the rust resistant springs are encased in canvas sleeves. The Automatic Lift, which comes in a variety of sizes, can be used with any standard size canvas truck or basket. It also may be adapted for other types of containers. For information, write to W. T. Lane & Bros. Inc. or to this publication.

(Request Item No. F-16)

## Avisco Technical Data Book

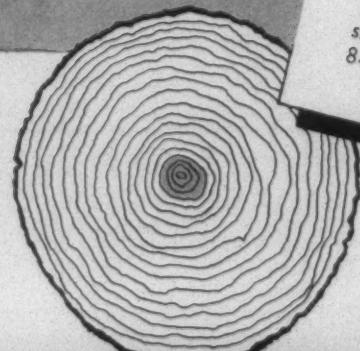
*Avisco Textile Chemicals*, a 40-page technical data book on the processing of all textile fibers, both natural and man-made, has just been published by American Viscose Corp. Explained are the uses and advantages of the various non-ionic waxes and other lubricants, softening, and anti-static agents developed by the corporation's textile research department in conjunction with the Atlas Powder Co. The point of view and emphasis, however, are on the over-all problem—the easiest and best way to process all fibers, from the raw state to the finished fabric, with the end-use in mind.

The booklet is intended for the use of throwsters, spinners, knitters, weavers,

# ONCE USED, ALWAYS SPECIFIED!

EVER-DEPENDABLE

**TATEM**  
SELECTED HICKORY  
PICKER STICKS



Yes—Tatem picker sticks cost a little more but last much longer. That's because they are made of only finest quality hickory—perfectly cut, seasoned and finished. Low maintenance cost on looms carrying these picker sticks testifies to the knowledge and modern manufacturing skills developed by Tatem over 84 years.

For that strong, smooth stroke at the heart of your loom you'll stay sold on Tatem.

PICKER STICKS • PARALLEL PLUGS • SWEEPSTICKS • CONNECTORS and OTHER LOOM PARTS

**TATEM**  
MANUFACTURING COMPANY  
EASTFORD, CONNECTICUT

SOUTHERN REP.—GREENVILLE BELTING CO., GREENVILLE, SOUTH CAROLINA

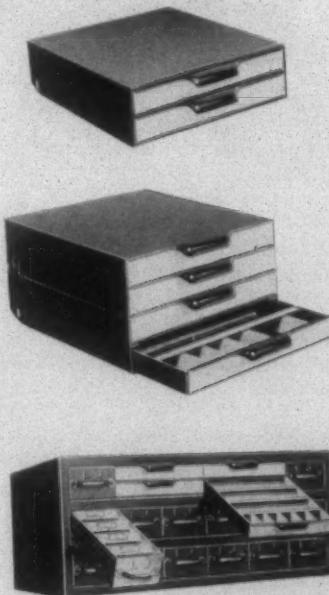
NORTHERN REP.—TATEM SALES COMPANY, EASTFORD, CONNECTICUT

dyers, and finishers, and is considerably more technical and more detailed than the 12-page booklet it replaces. It is also different in its point of view, which seeks to promote increased co-operation among the various processors with a view to raising the quality of the end products. It is divided into three chapters, on fiber preparation, yarn preparation, including sewing thread, and application of textile chemicals in dyeing and finishing. At the end is a discussion of the advantages of the Avco set process, preparation of the finishing solution, and procedure for using it.

All the textile chemicals discussed are manufactured by Atlas except the cellulosic ethers. These last are made by American Viscose Corp., which sells and services all of them. Mill procedures were worked out by the corporation's textile research department, and its technical personnel are available to users of the chemicals to work with them in their plants to obtain satisfactory results.

(Request Item No. F-17)

### Little Gem Cabinet



Precision Equipment Co. announces production of all-steel Little Gem tiny parts cabinets . . . a new idea in small parts storage . . . for use in industrial plants as well as in all types of offices. Little Gems consist of two 1½-inch high drawers in a rugged one-piece welded frame, having an over-all size of 3½H x 11D x 11"W. Each drawer is furnished with eight dividers, giving the cabinet a total of 24 adjustable compartments. Adding extra dividers makes possible a total of 56 compartments per unit. Tabs turn up and engage shelf above to prevent tipping when used as an insert in shelving. Any number of units may be stacked in one solid, rugged assembly. Little Gems come in a baked green finish and weigh ten pounds.

Little Gem cabinets are especially designed for insertion in Precision all-steel standard parts cabinets. These cabinets consist of 18 drawers. Each drawer has two dividers adjustable on one-inch centers making a total of three compartments per drawer or

# The Textile Shops.

Acid Tanks	Coppersmithing	Picker Screens
Ball Bearing Journal Assemblies for Slashers and Dry Cans	Cowl Ventilators	Perforated Metal
Bleaching Tanks and Tubs	Cylinders	English Wire Cloth
Card Screens Repaired, New	Spinning	Galvanized Wire
Card Screen Bars and Ribs	Spooling	Pneumatic Conveying
Card Screen Lickerins for Cotton and Rayon	Twisting	Systems
Chemical Tanks	Drip Pans	Quill Cans
Condensers	Dye Kettles and Vats (New)	Rolls of All Types and Sizes
Condenser Screens	Dry Cans	Size Kettles
Conveyors	New and Repairs	Tanks
Pipes and Returns	Driers	Waste Screens
	Filters	Special Machines
	Misc. Sheet Metal Work	Custom Built

SPARTANBURG, SOUTH CAROLINA, U. S. A.

## THE Bascom-Louise

largest and finest hotel in  
**HIGHLANDS, North Carolina**

4100 feet elevation—Supreme in comfort

At the "Top" of the Blue Ridge Mountains

"Friendly, cheerful folks gather in this magnificent mountain setting. Sports—all sorts—Swimming, tennis, golf, horses... everything! Beautiful rooms and superlative food. The vacation you'll remember longest and best!"

FROM \$10 A DAY

SPACIOUS TWIN-BED ROOM,  
ALL MEALS INCLUDED.  
Write for Brochure.



WATSON BARRATT, Pres.  
FREDERICK HEMPE, Mgr.

FOR THE TEXTILE INDUSTRY'S USE—

\$4 per cabinet. Label holders are on every drawer and divider. The over-all size of the standard parts cabinet is 34W x 13½H x 12"D and its shipping weight is 70 pounds. Precision Equipment Co. will be pleased to furnish literature and further information. (Request Item No. F-18)

### New Demountable Wheel

An entirely new type of demountable industrial wheel with a "bonded-to-steel" rubber tread that tests show will not slip, stretch, or creep under heavy loads is now being marketed by Rapids-Standard Co., Inc. Months of intensive on-the-job testing by 28 major industrial firms preceded the new product announcement. Called the Rapistan MB, this new class of wheel incorporates exclusive design features that promise to increase wheel life substantially and cut costs up to 30 per cent compared with regular demountable or molded-on rubber types.

The replaceable tire of the new Rapistan MB has a thick live-rubber tread that is bonded for life to a steel inner band. This steel band, unlike canvas or hard-rubber tread backing on many demountables, cannot warp, stretch or spread during molding operation or in use. The tread is of uniform thickness throughout and has twice the effective depth of other wheels because there are no thick or thin spots to cut tire life.

Rapids-Standard points out that when the molded-on rubber tread of regular wheels wears down, the user either has to discard the entire wheel or send it back to the factory for retread. He takes a complete loss on the old wheel, or pays freight and re-treading costs to put it back in service. He must also stock replacement wheels to use while the others are being retreaded. The fast tire replacement feature of the MB wheel eliminates this expense and delay, and saves up to 30 per cent at current wheel prices.

The Rapistan MB has a one-piece hub



"Thath right, he ith our biggest thinker."

with a retaining ridge that locks the entire assembly to the wheel discs, preventing shifting under side thrust. The Hyatt-type or Timken tapered roller bearings are bathed in grease that feeds from an extra-large reservoir supplied by a Zerk lube fitting. Felt seals and hardened steel hub caps permanently keep the grease in and dirt and water out.

This new wheel is now being manufactured in six and eight inch sizes with a

1 7/8-inch width tread in either cushion-rubber or Neoprene. Load rating is 400 and 500 pounds depending on wheel size. In accelerated load tests (700 pounds per wheel at five mile per hour speed) the Rapistan MB outlasted all of four competitive demountable and molded-on wheels tested under identical conditions.

The new Rapistan MB wheel is now stocked by industrial distributors for immediate delivery. (Request Item No. F-19)



## TEFLON coated slasher cylinders and drying cans stay clean!

TEFLON, DuPont's new miracle coating, cuts downtime for lapping and cleaning to the bone. Any equipment where sticky starches or other residue creates a frequent and costly cleaning problem can be TEFLO coated. This wonder plastic is spray-applied to the surface and baked on at high temperatures, giving a surface that defies the adhesion or cohesion of almost any substance.

Do you have a sticky problem in your plant? Write today for folder describing the cost-saving advantages of TEFLO.

**INDUSTRIAL COATINGS, INC.**  
BOX 3026, STATION A, GREENVILLE, S. C.

## Serving The Textile Industry

# \$18,000,000 Ciba Dyestuffs Plant Dedicated

WATER discharged from the new \$18,000,000 Ciba dyestuff plant at Toms River, N. J., flows into the Toms River purer than when it enters the plant, Dr. Harry B. Marshall, president of Ciba Co. Inc., told an audience of 500 at dedication ceremonies June 4.

Addresses by Gov. Alfred E. Driscoll, other New Jersey officials and industrial leaders marked the ceremonies, which included a tour of the plant, said to be the world's largest and most modernly-equipped of its kind.

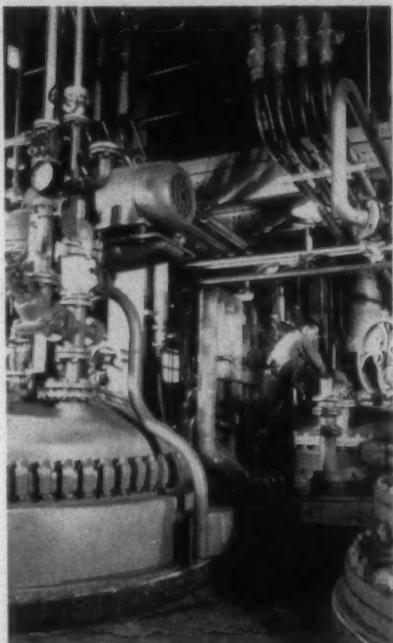
Normal production capacity of the plant is 4,000,000 pounds of paste dyestuffs a year, in a broad range of colors. Anthraquinone, the chemical from which the dyes are derived, also will be manufactured at the Toms River plant. It is located on a 35-acre tract cleared of trees, within the 1,250 acres of forest land owned by Ciba.

It is a multimillion-dollar project, designed, laid out and equipped according to advanced American and European practice, and is intended as the most modern and efficient unit in the dyestuffs industry.

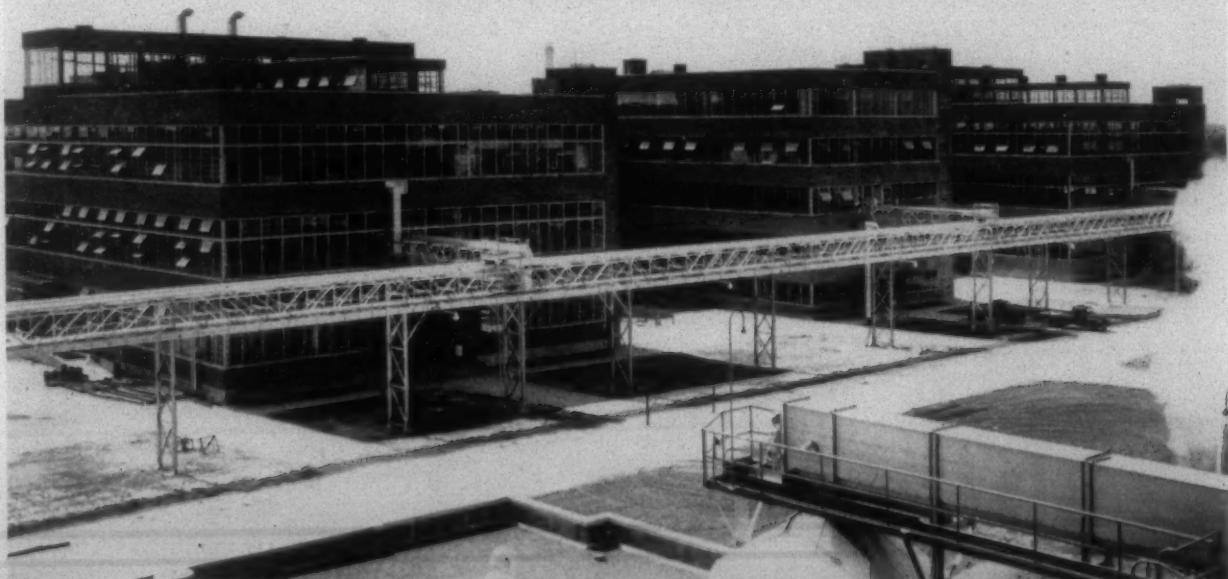
Provision has been made for a normal production capacity of four million pounds of paste dyestuffs a year, in a broad range of colors, and with certain modifications it would even be possible to double this impressive output if the plant were to be run on a seven-day basis during national emergency, and the variety of colors reduced to a basic few.

A dyestuffs plant, and particularly one designed for vat dyestuffs, differs from those chemical works where various steps in production can be carried on at separate places. The sequence of the processes demands that the entire job be conducted at a single location. In addition, the auxiliary operations required in dyestuffs production can be provided economically only when spread over a sizable volume of output, and this calls for an appreciable variety of equipment. These considerations add up to the fact that to begin vat dyestuffs production at all it is necessary to do so on a fairly large scale. This, then, explains the size of the Toms River Plant. In the long run, a small installation might prove much less economical to operate.

As a business matter, the decision of Ciba's management to launch a project of the dimensions of the Toms River works amid unsettled world conditions implied staunch faith in the future. Although markets in years ahead are never known, they can be estimated soundly on the basis of past experience and on principles that have proved sound in trade practices. In this Ciba was particularly well equipped. As an enterprise that had, over almost a century, continually pushed forward not only in technology but marketwise as well, certain basic principles had been developed. One of these was that, whenever a market grew to a sufficient size to warrant being served by a production unit of its own, such a unit



Close-up of reaction kettles where the carefully controlled operations begin in the manufacture of Cibanone Anthraquinone vat dyestuffs, a class distinguished for their exceptional fastness to light and washing. There are batteries totalling more than 100 of these reaction kettles in the Ciba Toms River Plant.



The three main manufacturing buildings of the Ciba Toms River Plant, as seen from the north.

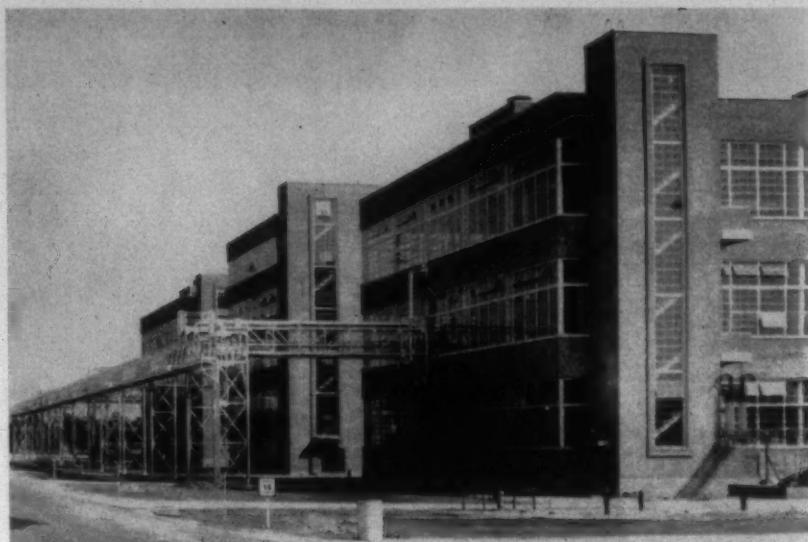
## SERVING THE TEXTILE INDUSTRY—

should be established, rather than continue to import the products from abroad.

Ciba had already followed this policy in setting up other plants in the United States, and in 1949 decided that the expanding American market for Ciba vat dyes had reached such proportions that a new plant, to serve this market, was justified. And so the financing, planning and construction of the Toms River works proceeded.

Actually, the plant site is sequestered, for only about 35 of the 1,250 acres of the new Ciba property were cleared of trees to make way for factory buildings and auxiliary plants. Natural advantages possessed by the region influenced Ciba's decision to build at Toms River. For one thing, a plentiful supply of pure water, all-important in the making of dyestuffs, was assured both by the river itself and copious reservoirs of untapped underground water. Linked with this was the need for disposal of final wastes or effluents. These materials, produced by the chemical processes in the plant, are so treated that their chemical activity is neutralized, and the flow-off is harmful neither to fresh-water fish nor to marine life of the coastal bay. A site on the river bank thus offered a distinct advantage to consider.

Broader economic geography also played a part. Toms River lies 53 miles from Philadelphia, 70 miles from New York, and is served by two railroads and by the finest hard-surface highways for truck and passenger car transport. The site is easily accessible, therefore, to principal markets and major distribution centers along the eastern seaboard. Of like importance, supplies needed in this specialized chemical works can be brought in without extraordinarily long freight hauls such as would have been



**View from the west of the Ciba Toms River vat dyestuffs plant at Toms River, N. J. The most modern plant of its kind, more than three years in the building at a cost of more than \$17,000,000, the manufacturing, administrative buildings and service areas occupy more than 35 acres.**

necessary in some parts of the country. The fact that the executive offices of Ciba are but two hours away by auto was an added convenience. A climate free from great extremes, excellent soil conditions and the possibility of economical initial costs of erection also favored Toms River.

Soon after Ciba purchased the land for its new plant in June 1949 bulldozers and logging apparatus were to be seen trundling along U. S. 37 into the virgin woodland site, cutting a wide swath to a point almost in the center of the property. Weeks of clearing and moving the timber followed, then excavating crews came in, and within a few months surveyors and tracklayers were putting down the siding that now

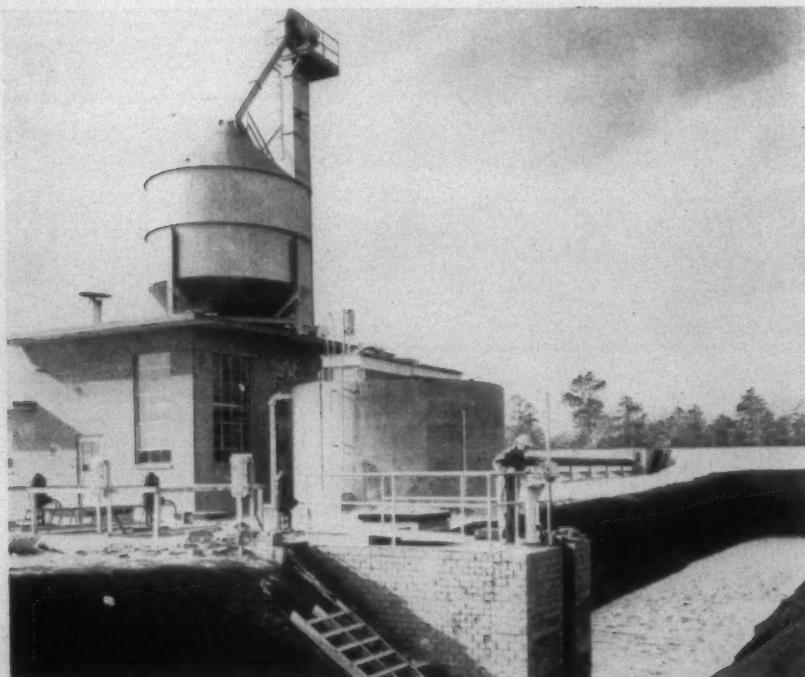
runs a mile and a third from the Central Railroad of New Jersey line directly into the plant.

Steel workers rigged the skeletons of large and small structures—a power plant, a five-story mill building, connecting with three-story twin factory units where the vat colors are actually produced. These steel erectors were followed by other building trades, and so day by day the forest was converted into a finished group of industrial buildings.

Though the plant was to be built on a large scale, its elements had to be fitted together, first in plan, then in actuality, with the precision of a Swiss watch. The water supply system alone was a sizable engineering undertaking, for the plant drinks in from one and a half to two million gallons of water a day, and pours most of it out again, clean, clear and unpolluted, after it has performed its part in the complicated mechanical and chemical operations of dye-making. Deep wells were dug, powerful pumping apparatus and modern sewage treatment and disposal facilities installed. These include a composting reservoir, a pit in which motor-driven stirrers neutralize the composted waste liquids with lime, a pond for sedimentation of solids, a purifying basin where the clear, neutralized effluent is oxygen-saturated and finally the effluent is sterilized with chlorine. Additional equipment handles and stores lime, pumps and a treatment laboratory.

Miles of pipelines were installed from one end of the works to the other, some laid underground, some weaving in and out of buildings, some carried along overhead steel viaducts. Through these pipes flow water, steam, gas, oil, powdered coal, acids, alkalies and other chemicals.

In addition to an electric power plant, with its network of distribution lines, a complete steam plant was erected, capable of producing 100,000 pounds of steam per hour, at a pressure of 500 pounds and with a 150° superheat. This plant, which burns either oil or pulverized coal, is sufficient to



**Shown here is part of the elaborate effluent treatment unit at the Ciba Toms River Plant. Process waste liquors are collected, neutralized with lime, sedimented, oxidized with fresh air, and chlorinated. The purified effluent . . . clear, neutral, free of odors or sediment and harmless to fish life . . . is discharged into the Toms River.**

care for future expansion needs, and can be equipped with extraction turbines, should need for their use arise.

As the construction work went on, a "tank farm," a cluster of enormous steel cylinders, rose near the factory buildings. In these tanks are stored the acids and other liquid chemicals needed in dyestuffs making, while solid chemicals, in drums, barrels and bags, are kept in a nearby concrete warehousing area.

In addition to these facilities for the handling and processing of materials, proper shelter and convenience were needed for the people who operate the plant. The nerve center of the works is the administration building, the headquarters for the local managerial staff and clerical employees, the place where business visitors are received and directed to various parts of the works and where staff conferences and meetings are held. Down the avenue from the administration building are a number of smaller structures built for special purposes. These include an up-to-date fully equipped fire house, a garage, engineering, maintenance and machine shops among others.

The visitor arrives at the Ciba works down a broad avenue leading from U. S. 37, three-quarters of a mile away. He enters the gate house, of attractive modern design, to which are attached modern first-aid and medical facilities. Adjoining these and a part of the same structure is the low, spacious cafeteria with gleaming kitchens, lounges, and outdoor terraces for the comfort of employees and capable of serving 150 at a sitting.

#### Toms River Production

Ciba has been in the forefront since 1907 among developers and producers of the vat dyes derived from anthraquinone. This chemical substance is obtained from coal-tar, extracted through several intermediate steps into a yellowish brown powder. Its chemical composition indicates to the technician that it can be expanded into other substances, by addition of various chemicals—and these substances, of various colors, have physical and chemical properties which make them useful as dyes. At the Toms River works dyestuffs of about 35 different colors are produced. Which ones are made depends upon market demand.

At the Toms River plant not only are the vat dyestuffs produced from anthraquinone but the anthraquinone itself is made there. In other Ciba plants many other kinds of dyes are produced, but this plant is intended at this time essentially for the anthraquinone family of vat dyes.

For the production of four million pounds of anthraquinone vat dyes annually, the Toms River works will require a total of about 22 million pounds of various chemicals. Among the principal ones are sulphuric acid, caustic soda, muriatic acid, phthalic anhydride, ammonia, benzene, nitrobenzene, glycerine and alcohol.

To handle and process these chemicals requires special equipment, from microscopes to examine the structure of a specimen to a giant autoclave, which weighs 36 tons and is the largest and most expensive single piece of chemical apparatus in the plant. Next most impressive to the auto-

clave is a giant sublimator. The quality and efficiency of the Toms River dye-making equipment, together with its arrangement, have earned for the plant the title of world's most modern.

Production begins as the chemicals flow from the tank farm through pipelines into the main manufacturing buildings. This group of buildings has been laid out on principles of the most modern factory design. The tallest one, five stories high, stands between two others, each of three stories.

Different processes are centered in each of the three buildings. One of the three-story structures is for processing flammable materials only, and its twin in outward appearance is for non-flammables. The building in the center of the group is for final processing, such as making dye-cake into paste, or drying, grinding and mixing as powders. On its top floor are located the control laboratories.

The main processes in either of the smaller buildings begin on the second floor. Liquid chemicals flow from the tank farm into a storage tank, thence into a measuring tank on the third floor and so down into one of the kettles on the second floor. These kettles—there are about 100 in the plant and they vary in capacity from 300 to 5,000 gallons—are lined with materials not affected by the action of the various chemicals. They are tightly covered so as to withstand high pressures when subjected to heat, and are equipped with technical control devices, so that uniform quality is assured.

Where dry chemicals are used, the chemicals in measured proportions are trucked to the kettle, and emptied into it from the bags, barrels or drums in which they have been stored. Then they are stirred, heated and distilled within the tightly locked kettle, under steam pressure. The finished liquid formed in the kettle then is blown through pipes to the floor above, where it passes into a filter.

The filtering apparatus in the two manufacturing buildings varies, according to the particular process being used, among three types—vacuum filters, filter presses and pressure filters. No matter what type of filter is used, or whether the original materials were liquid or solid, what comes out of a dyestuff filter is a cakey mass formed in the processing, readily handled and transported in conveyances called "cake cars."

Across a connecting bridge from either of the manufacturing buildings the dye-cake is trucked to the fourth floor of the center building. According to its particular function, the dyestuff then is transformed either into paste or powder. The modern alchemy of the Ciba kettles is made possible by expert knowledge of precisely what chemicals, in what exact proportions, should go into them, to combine with the anthraquinone which is the starting point in the production of the entire range of vat dyestuffs at this new Ciba Toms River plant.

#### 3M Acquires American Lava

Acquisition of American Lava Corp. of Chattanooga, Tenn., by Minnesota Mining & Mfg. Co. through a \$5,000,000 stock

transfer was announced recently. Herbert P. Buetow, president, and John Kruesi, president of American Lava, said officers of the two firms have approved a deal by which the Chattanooga firm would become a wholly-owned 3M subsidiary. Terms call for American Lava stockholders to trade their common and preferred shares for 3M common. Mr. Buetow said his firm's primary interest in acquiring Lava was to broaden 3M's participation in the electronics field.

Mr. Buetow said 3M plans no changes either in American Lava's management group or in its operating policies. Mr. Kruesi will continue as president and all officers and executives will continue in their present capacities. Robert L. Westbee, general manager of 3M's electrical insulating and sound recording tape division, will be responsible for liaison between the parent company and the new subsidiary.

"Our joining 3M means that Lava sales and production efforts will be aided by 3M's experienced research and product development groups," Mr. Kruesi said. "My associates and I feel that help available through this channel can lead American Lava to even greater success and prestige within the field of electronic insulation."

Like 3M, American Lava was founded in 1902 and celebrated its golden anniversary last year. It produces more than 40,000 types of electrical insulating material. Most of these items are sold under the trade name A1SiMag. The company also produces crucibles, nozzles and chemical-resistant fittings for the thermal and chemical industries and thread guides for the textile industry.

#### Houghton Plans New Plant

E. F. Houghton & Co., manufacturer of chemicals for the textile industry, is reported to be considering Charlotte, N. C., as the likely site for construction of a new \$2,000,000 plant. Charleston, S. C., and Atlanta, Ga., also are being considered as possible sites. According to D. J. Reynolds, vice-president in charge of sales, work on the new plant probably will begin sometime next year. Mr. Reynolds stated that the company's decision to locate a plant in the South was influenced by the fact that Houghton's sales in the South doubled last year and also that national market trends point to the South as one of the country's fastest growing industrial areas. Other Houghton plants are located in Philadelphia, Chicago, Detroit, San Francisco, and in Canada, England, France, Sweden, Italy, New Zealand and Australia.

#### Firm To Change Name

Meinhard, Greeff & Co. Inc. plans to change its name to Meinhard & Co. Inc. The change will take place coincident with the firm's move from 51 Madison Avenue to 390 Fourth Avenue, New York City. The corporate organization of the factoring firm will remain the same.

The move to 390 Fourth Avenue, which building is now undergoing renovation, will probably be made in about two months. Meinhard, Greeff will occupy the street, second and third floors of the eight-story

## SERVING THE TEXTILE INDUSTRY—

building, C.I.T. Financial Corp., of which Meinhard, Greeff is a factoring unit, will utilize the remaining floors of the building. C.I.T. will keep its headquarters at 1 Park Avenue.

## Connection Severed

Jenkins Metal Shops Inc. of Gastonia, N. C., announces that it no longer has any interest or connection whatever with Jenkins Rennedding Co. Inc., also of Gastonia.

## Machinery Firms Expands

Completion of an ambitious program of modernization and expansion at the Graham, N. C., plant of Burlington Engineering Co. Inc. has been announced by J. Saunders Williamson, president of the firm. Burlington Engineering specializes in the fabrication of textile machinery, with greatest production in stainless steel dye house equipment. Included in the construction program was the addition of 5,000 square feet of working space in the plant, the complete rebuilding of the front of the plant to allow more office space and better working conditions, and the addition of a pilot plant for testing and experimentation. A sprinkler system was also installed in the plant.

Burlington Engineering Co., which was

incorporated in 1946, is the only manufacturer of piece goods dyeing equipment in the entire South. Equipment manufactured by Burlington Engineering Co. is now in operation in many textile plants throughout the United States, Canada and several foreign countries.

The firm turns out several types of dye house equipment, including becks, or piece dyeing machines, beam and package machines and pressure bleach, boil-off and dye machines for all types of tricot, marquisette, laces and other open weave fabrics. These machines are designed by Burlington's own staff of graduate engineers.

## Oil-less Bronze And Iron

Powder Metal Products Inc., St. Marys, Pa., has appointed Enterprise Engineering, Professional Building, Charlotte, N. C., as its representative for the Southeastern states. Powder Metal Products manufactures various oil impregnated bearings, bushings, and special parts of bronze and iron for the textile and hosiery industries for use in dobby and cam sheaves, take-up bearings, feed roll bearings, etc., as well as for spinning, carding and combing units.

## Sales Corporation Formed

Formation of the new Marshall & Williams Sales Corp. of Greenville, S. C., to

supply finishing equipment for textile finishing plants in 11 Southern states is announced. The new company will be under the direction of Fred H. Land, president and treasurer. Marshall & Williams Sales Corp. will distribute in the South all finishing equipment produced by James Hunter Machine Co. for cotton and synthetic fabrics, in addition to the standard line of Marshall & Williams products.

Of special interest is the new Hunter Vapojet dryer, which utilizes superheated steam instead of hot air. Speeds of drying are said to be far in excess of any so far realized in the textile field; and controlled drying, which eliminates shading and undesirable overdrying, is achieved. Fabrics of all types, from the most delicate rayon crepes to heavy corduroys and worsteds, have been dried successfully with appearance and handle superior to those obtainable with goods dried on a conventional air machine.

## Standard Plans Charlotte Plant

Plans for the construction in Charlotte, N. C., of a plant to manufacture chemicals for the textile industry were announced recently by Standard Chemical Products of Hoboken, N. J. The total investment will be between \$500,000 and \$750,000.

The building will contain approximately 50,000 square feet of floor space and will be T-shaped to allow for future expansion. According to Louis L. Grombacher, president, the plant ultimately may be expanded to five times its original size.

Standard's Charlotte branch will supply Southern textile mills with chemicals utilized in dyeing and processing of fabrics. The firm expects to double its production with the opening of its new Charlotte facility.

## Closing Charlotte Branch

Standard Mill Supply Co. announces that its branch office and plant at 2319 Hutchinson Ave., Charlotte, N. C., will be moved to the firm's general office and plant at Pawtucket, R. I., effective July 15. J. Kenneth Sumner, 5018 Park Road, Charlotte, will continue as sales representative for North and South Carolina. Charles G. Stover, P. O. Box 6, West Point, Ga., will cover Georgia and Alabama.

## Tooling For New Loom

Thomas T. Patton, president of Hunt Loom & Machine Works Inc., Greenville, S. C., announced recently that his company has received substantial orders for new looms from Borden Mills of Kingsport, Tenn., and Abney Mills, Greenwood, S. C. These new looms are said to be revolutionary in design, created by the Borden organization, pilot models engineered and built by Hunt. Tooling to produce the looms, which will be known as Model H-B-3, is near completion and production will start almost immediately. Mechanical details and new engineering features of the looms will be announced at a later date, Mr. Patton said.



The recently-expanded plant of Burlington Engineering Co. Inc.



In this photo, workmen at Burlington Engineering Co. are fabricating an open-width carpet dyeing machine. This machine will accommodate carpeting up to 14½ feet in width.

## Engineers Discuss Synthetic-Wool Blends

New methods for blending synthetics with wool provided the theme for most speakers at the recent Spring meeting in Boston, Mass., of the textile engineering division of the American Society of Mechanical Engineers. Lindsay Dexter of Pepperell Mfg. Co., Boston, chairman of the division, declared that it was the group's belief that "the future of New England lies in the blending of synthetics with wool."

According to Rene Bouvet of the textile research department of American Viscose Corp., the luncheon speaker, the new textile fibers are providing the industry with the material for expansion for many years to come. The possibilities for blends as offered by the new fibers are phenomenal, he indicated.

"Today there are approximately 20 fibers available," he said. "Using four of them to a blend, with the proviso that the proportions of each fiber may vary in five per cent increments from ten to 50 per cent, some 1,816,875 blends are within reach. If one new fiber should be added to the assembly of the present 20, the blend possibilities are increased by 427,500, thus building to a total of 2,244,375 choices," he explained.

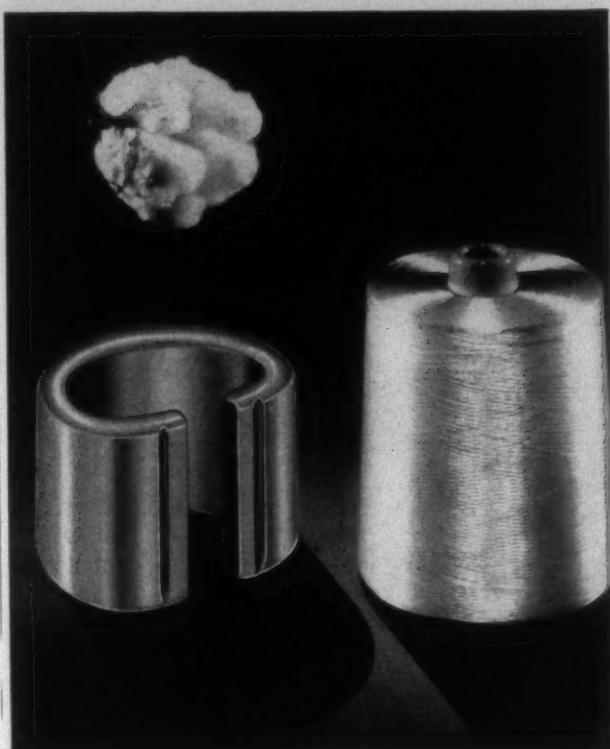
In discussing the place of viscose in the future, Mr. Bouvet observed that research already knows of many ways to eventually improve the product while retaining a cost advantage.

In a talk titled "A Treatment of the Subject of Synthetic Fiber Characteristics," Daniel M. Thornton, staple fibers manager, customers service section, textile fiber department, E. L. du Pont de Nemours & Co. Inc., Wilmington, cautioned that a complete understanding of the basic characteristics of synthetic fibers was required for their efficient handling in the plant.

S. Jack Davis of the research and development department, the Chemstrand Corp., Decatur, Ala., observed: "Fundamental knowledge of fiber properties is the foundation stone of any program of research directed toward satisfying consumer demands for textiles. . . . No one, for example, would seriously suggest fabrication of a V-belt cord from wool if he were informed on the subject of wool tenacity. Yet the durability of wool to wear in carpets and upholstery can be understood in terms of fundamental knowledge of the stress-strain diagram." The topic of Mr. Davis' paper was "Research and Experience in Meeting Synthetic Fiber Consumer Problems."

Samuel L. Fuller of Barnes Textile Associates Inc., Bos-

## A STRONG LINK



## CARTER TRAVELERS

Increase your profit opportunities with these strong, dependable links in your production chain. In mill after mill a switch to CARTER TRAVELERS has meant less ends down, smoother running work and stronger, finer yarn.

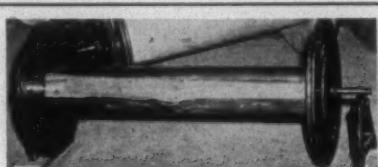
Your quality goes up — costs come down — when you put

CARTER TRAVELERS  
to work.

**CARTER TRAVELER COMPANY**  
DIVISION OF  
**A. B. CARTER, INC.**  
GASTONIA N. C.

### REPRESENTATIVES

R. A. Haynes, Special Representative	114 W. Fifth Ave., Gastonia, N. C.
W. L. Rankin	501 S. Chester St. Gastonia, N. C.
P. L. Piercy	128 Hudson St. Spartanburg, S. C.
J. R. Richie	3014 Lewis Farm Road, Raleigh, N. C.
J. W. Brown	P. O. Box No. 560, LaGrange, Ga.
J. K. Davis	P. O. Box No. 129, Auburn, Ala.
C. E. Hemick	44 Franklin St., Providence, R. I.
Hugh Williams & Co.	47 Colborne St., Toronto 1, Canada



### COMPLETE SECTION BEAM SERVICE

Beams rebuilt, balanced, refinished. All work guaranteed unconditionally.

**CRONLAND WARP ROLL CO., Inc.**  
Lincolnton, N. C.

Manufacturers of Loom Beams, Comber Lap Pins, Cloth Rolls, Warp Rolls, Card Stripper Rolls.

FOR almost a century Cole elevated tanks have provided a dependable water supply for mills and communities. Cole quality is assured by careful, experienced designing and watchful supervision from blueprints to finished tank. Send us your inquiries for tanks from 5,000 to 2,000,000 gallons — stating capacity, height to bottom, and location. Write for latest Cole catalog — "Tank Talk."



# 98<sup>th</sup> YEARS OF EXPERIENCE IN BUILDING TANKS

Established 1854



## J. N. PEASE & COMPANY

*Industrial Engineers*

119½ E. FIFTH ST.

CHARLOTTE, N. C.

ton, predicted that it was practical to assume there would always be an increasing demand for fabrics made from new types of blends. Consumer acceptance of the newer synthetics is enthusiastic, he said. The textile machinery manufacturers have taken the initiative and have made splendid strides in developing new equipment to meet the changing requirements caused by the introduction of synthetics and blends, he said. "It is to be anticipated that this advancement will continue and it is to be hoped there will not be a let-up or resting on laurels." He outlined a number of procedures which modern mills are following in blending. His talk was titled "An Engineering Approach to Planning and Developing a Blended Synthetic Yarn Producing Unit."

Julius B. Goldberg, research director of J. P. Stevens & Co. Inc., New York, disclosed that there had been several new developments in the finishing of fabrics made from synthetic and synthetic, man-made fiber blends. Johns-Manville Corp. has been working on the development of high-temperature resistant Orlon acrylic fiber by the Du Pont process, he stated. His talk was titled "Synthetic Fabric Finishing Developments."

### Spinners Cite Pneumatic Top Roll Pickers

Members of the Textile Operating Executives of Georgia, at the recent Spring meeting of the group in Atlanta, Ga., revealed that installation of pneumatic top roll pickers has enabled Georgia mills to increase spinners' sides by as much as 15 per cent. Representatives from approximately 28 Georgia mills and mill groups, operating 1,448,468 spindles, took part in the open forum discussion.

T. M. Hampton, superintendent of the Hillside Plant of Callaway Mills Co., LaGrange, Ga., general chairman, presided over the discussions. John I. Arthur, superintendent of Covington (Ga.) Mills was elected to the executive committee to succeed Albert Johnson, assistant superintendent of the Lanett Division of West Point Mfg. Co.

George McMillan, Crystal Springs Bleachery, Chickamauga, Ga., presided over the spinning discussions. Spinners, relieved of cleaning top rolls, can run up to 26 sides, one mill operator reported, where on conventional type spinning frames the spinner can operate only 12 sides. Mills, using the non-lubricating type top roll on the middle and back line, had noted little difference with regard to quality and ends down.

The mill men preferred flat top clearers on Roth spinning frames. Those mills with experience favored revolving clearers and reported little rolling up of waste. The operators agreed that traveler pin clearers are necessary for good running work, but differed considerably as to whether they should be bent toward the ring, away from the ring, or straight. Cleaning schedules and methods varied considerably at the different mills. Most cleaned their Parks Cramer overhead traveling cleaners with every shift.

Lower drafts, uniform staple, controlled humidity, constant temperature, overhead cleaners, combing out short fibers, cleanliness in spinning room, and correct roll setting were some of the practices suggested for controlling cotton fly. One mill man suggested buying a better grade of cotton.

The tolerance allowed in yarn numbers varied from 2.5 to five per cent, with most mill operators preferring three per cent. Constant blowing off of the spooler and good

brushes on it has been found as the best method of controlling wild yarn. Breaking the long tail off at the base of the bobbin also helps, it was reported.

Robert W. Lawson, plant manager of Chicopee Mfg. Co., Gainesville, led the session on carding. Methods of blending cotton and synthetics were discussed. Mills varied considerably as to methods of mixing and blending cotton fibers, with the average ranging from 20 to 40 bales. Most use humidity control, with around 50 per cent relative humidity preferred in the opening room.

The operators could agree on no "best method" for blending and tinting synthetics. One mill reported a special blending room, while others used fiber meters. It was agreed that tinting should be done at the earliest point in the process. Most operators largely prefer the return air filters with one fan or machine exhausting into one filter. By means of adjustments lap uniformity can be maintained, they said.

Control of waste also came in for considerable discussion with much interest shown in the amount removed at various points in the opening processes. Generally, it was found that from two to three per cent waste was removed in the two rooms. Most operators reported that nep counts increased with higher card speeds, but that there was little significant difference in yarn strength. However, an increase in fly was noted along with considerable increase in maintenance cost at the higher speed.

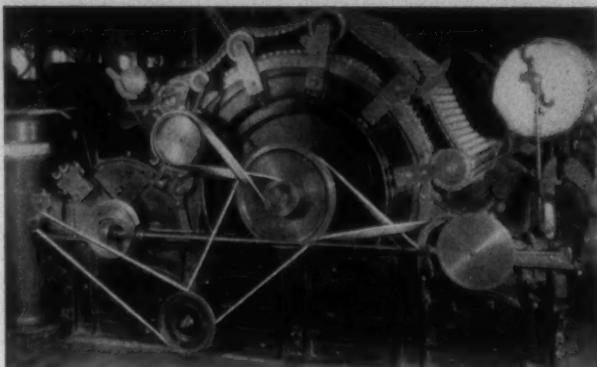
The operators agreed that anti-friction bearings on lickerins are satisfactory with reports of some running seven years without trouble. There was less experience as to anti-friction bearings on feed rolls and cylinders, but several felt that it was a definite step toward improvement in quality and reduction of costs. Ball bearings, it was said, permit the licker-in to be speeded up and reduces neps. The mills are giving much attention to drawing rolls replacing old rolls and constant maintenance in an effort to improve uniformity of sliver. Several have gone back to the picker room seeking to make a lap as even as possible.

Those mills, using the G-38 top cone are experiencing no difficulties and report a more even bobbin and less changes of tension required when metallic covering is widely used on top rolls for drawing flat cleaners and are largely preferred, it was noted. In the discussion of testing equipment for the card rooms, it was brought out that the Saco-Lowell sliver tester and the Uster tester are most widely used, with lap meter considered most valuable.

### Chace Heads National Federation Of Textiles

William N. Chace was elected president of the National Federation of Textiles Inc. at the 80th annual meeting of that organization on May 27. Mr. Chace is vice-president and director of Greenwood Mills, New York. Vice-presidents elected by federation members at the same time are: Andrew J. Sokol, vice-president and director of J. P. Stevens & Co. Inc.; Edmon G. Luke, vice-president and director of Textron Inc.; and R. Stewart Kilborne, president of William Skinner & Sons. Irene Blunt was re-elected secretary-treasurer.

Nine executives in the industry were elected directors of the federation at the meeting, as follows: Harry L. Dalton, vice-president, American Viscose Corp.; William H. Dribben, assistant vice-president, Cone Mills Inc.; John J. Goldsmith, vice-president, Hess-Goldsmith & Co. Inc;



## TILTON WOVEN ENDLESS BELTS

### Uniformly Strong

Eliminate vibration and transmit maximum power without slippage.

### Constant Length

Practically all stretch and shrinkage taken out at factory.

### Flat and Round

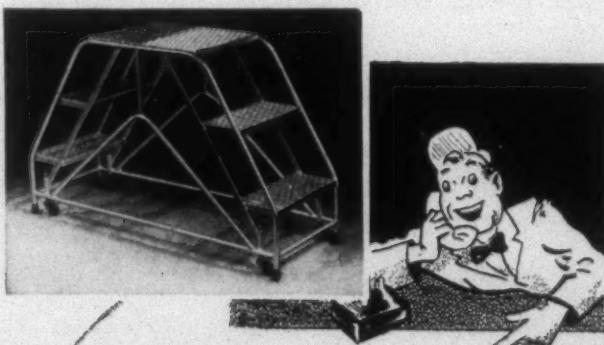
Card Bands + Lickerin Belts + Doffer Belts + Cone Belts + Belts for Driving Flats.

Exclusive Agents in Virginia, the Carolinas and Georgia

## Oliver D. Landis, Inc.

718 Queens Road

Charlotte 7, North Carolina



Call Us

## For Ladders

Any Type Industrial Ladder  
for Mills

Power Houses

Storerooms

Special Applications

## Cocker Machine & Foundry Co.

Gastonia, N. C.

# F & E

GOES TO THE  
SOURCE  
OF BAD SMELLS!

GIVES OFF FRAGRANCE  
WHILE DEODORIZING

WHILE transforming foul washroom odors into new, invisible, odorless compounds, F. & E. gives off the fragrance of genuine eucalyptus oil. At the same time, it kills many of the bacteria which produce ammonia and other rank gases.

USE F. & E. SOLUTION around toilets and urinals . . . for flushing garbage receptacles and sick room accessories . . . for dressing room benches and lockers . . . wherever agreeable, high-speed deodorization is required.

Write for Folder FE-F745

FOR FREE  
**SANITARY SURVEY**  
of your premises  
consult your  
**DOLGE SERVICE MAN**

Dependable  
**DOLGE**  
WESTPORT, CONNECTICUT



## LONGER LASTING BOILER FURNACES

"Boiler furnaces lined with CARECO last two to four times longer than those lined with fire brick. Write for quotation."

CAROLINA REFRACTORIES CO.  
Hartsville, S. C.

**BIBERSTEIN, BOWLES & MEACHAM, INC.**  
TEXTILE ARCHITECTS & ENGINEERS  
CHARLOTTE 4, N. C. • Phone 2-5111

Gardiner W. Hawkins, vice-president, Paul Whitin Mfg. Co.; John P. Holmes, vice-president, Celanese Corp. of America; Reuben Kittenplan, president, Chopak-Kittenplan Corp.; William L. Lyall, vice-president, Bates Mfg. Co.; Robert M. Schwarzenbach, president, Schwarzenbach Huber Co.; Jackson E. Spears, vice-president, Burlington Mills Corp. Messers. Chace, Sokol, Luke and Kilborne already were members of the board of directors.

Miss Blunt, as secretary, made a general statement to members that the year 1952 had been a very satisfactory one from the standpoint of both accomplishment and steadfast support by the firms making up the industry. However, the customary detailed report of the year's activities was deferred until October. It is planned then to hold a celebration of the organization's 80th anniversary, which will embrace an afternoon program of speakers and discussion of appropriate subjects, followed by a cocktail party and formal dinner. The intention is to expand the usual annual report so as to make it an industry "handbook" which will serve as a long-lasting souvenir of the 80th anniversary.

### Cite Advantages Of Sequestering Agents

According to Nesbit Johnston of the Geigy Co. Inc., Atlanta, Ga., organic sequestering agents have had a resounding impact in the textile field and are taking textile processing out of the "horse and buggy" era. Mr. Johnston was addressing the recent Spring meeting of the Southeastern Section of the American Association of Textile Chemists & Colorists at the Biltmore Hotel in Atlanta.

"We have just begun to scratch the surface and will in the future be greatly benefited from their use," Mr. Johnston declared. He recommended that organic sequestering agents be tried in almost all textile wet processing operations due to their ability to take out all troublesome influences of hardness.

Mill surveys indicate the need for further investigation of the effect of homogenizing valve surfaces on paste viscosity and the relationship that may exist between the congealed paste characteristics and sizing properties, Dr. Walter Carter, the Chemstrand Corp., Decatur, Ala., told the group. Dr. Carter reviewed the study of new techniques in warp size preparation that was made by the Southeastern Section as its intersectional contest paper.

Sequestering agents have the unique feature of being able to tie up the heavy metals which usually comprise the major component of hardness. Thus they give a more uniform background in the preparation of goods prior to dyeing or bleaching, the Geigy representative declared. Ash content of kier boiled samples can be reduced from 3,241 p.p.m. to 605 p.p.m. when sequestering agents are used in regular kier boil charge and iron can be removed from cloth, he said.

Among other practical aspects in textiles he cited the elimination of the formation of troublesome soap curds in the boil off for preparation of rayon piece goods as well as a cleaner base on which to dye, scouring of knitgoods, boil off in package work, hosiery, rawstock and others giving the best possible base for dyeing or bleaching. "No other chemical agent gives so much of that which is desired for so little cost and effort."

The addition of 25 per cent sequestrant to a vat navy blue dyeing allows the dyer to cut his formula by 20 per cent, greatly aiding color and consistency, he said. Se-

questants also contribute to the dyeing of naphthols in correcting conditions conducive to crocking. In eliminating variables they bring more consistent results, he declared. For the most part, ten per cent of the 70.2 per cent active product will suffice for dyeing of ordinary directs, he declared.

The study of new techniques in warp size preparation reviewed by Dr. Carter included the application of viscosity measuring instruments to hot starch pastes and the survey of mill processing equipment and procedures.

The trend to the elimination of batch kettle cooking methods in favor of machine processing has brought this phase of textile wet processing into the position which makes possible a more technical approach, it was pointed out.

Among other things the study disclosed that the value of adapting instrumentation to continuously record and/or control size viscosity in flow systems was evident, the textile chemists were told. These instruments should signal the need for a manual or automatic correction when size is not being prepared within predetermined viscosity limits.

The study also indicated the value of mill viscosity determinations with continuous size processing equipment as a scientific basis for insuring more uniform viscosities to reduce deviation in the added size content of warp yarns in the slashing operation, Dr. Carter emphasized.

Chairman Jack Davis, Chemstrand Corp., disclosed that the next sectional meeting would be held in Columbus, Ga., Sept. 8. The Southeastern, South Central, and Piedmont Sections are sponsoring the 1954 national convention of the A.A.T.C.C. to be held at the Atlanta Biltmore, he made known. To insure that the new administration of the Southeastern Section has ample time to prepare for the national meeting he recommended that the election of officers be moved ahead. A nominating committee with Russell Gill, Southern Sizing Co., Atlanta; Gillespie Smith, Calco Chemical Co.; A. Kempton Haynes, Rohm & Haas; Bob Horney, Ciba Co. Inc., and Herman Dickert, dean of A. French Textile School was named.

#### Book Themes Application Of Vat Dyes

*The Application of Vat Dyes* (A.A.T.C.C. Monograph No. 2), 448 pages, prepared by a board of editors from the American Association of Textile Chemists & Colorists. This manual shows some strong chapters, some fair ones, some weak and some that could have been condensed without loss. The book has its fine points but could have been

#### STEWART MACHINE CO., INC.

Manufacturers

#### QUALITY TEXTILE REPAIR PARTS

SPINNING & TWISTER BOLSTERS + RINGS & HOLDERS  
LIFTING RODS & BUSHINGS

EXPERT SPINDLE REPAIR + MACHINE SHOP EQUIPMENT

Phone. WIlkison 5-0327 or Wire

PHONE 5-0327 • WILKINSON BOULEVARD • P O BOX 1161  
GASTONIA, NORTH CAROLINA

## QUALITY WORKMANSHIP with PROMPT SERVICE

Two to three weeks delivery on  
all repairs to Rollers, Flyers & Spindles

Repairing all types of Rolls and making new Steel Rolls  
Overhauling Drawing a Specialty

Repair and make NEW Card Room Spindles

Make new any Fluted Roll • Lifter Rods  
Gears • Trumpets

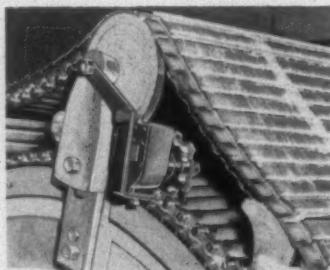
Satisfaction Guaranteed on all Work

## Gastonie Roller, Flyer & Spindle Co., Inc.

1212 E. Industrial Ave.

Gastonie, N. C.

Phone 5-1531



For Thorough,  
Easy Oiling of  
Card Flat Chains  
with No Lost  
Production Time

More Than 70 Southern Mills Are Using  
**M & J AUTOMATIC CARD  
FLAT CHAIN LUBRICATORS**

Oils chain while card is operating . . . Increases life of chain  
by more than 40% . . . Reduces replacements of costly gears  
. . . eliminates "bucked flats" which cause inaccurate settings  
. . . Easy to install

20 DAYS FREE TRIAL IN YOUR MILL!

For Additional Data Write

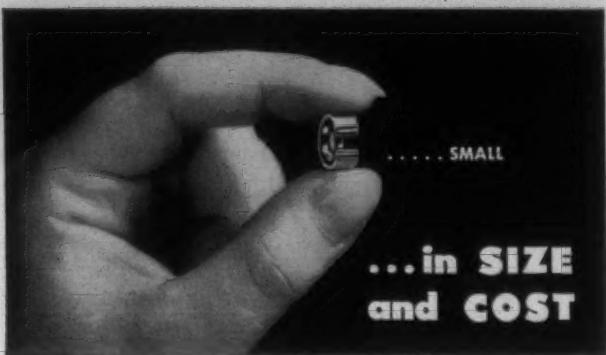
#### W. G. JARRELL MACHINE CO.

P. O. Box 2154

Charlotte, N. C.

Agents:

Charlotte Mfg. Company, Charlotte, N. C.; Quality Parts and Repair Co., Box 623, Gastonia, N. C.; Textile Supply Co., Dallas 1, Texas; Methune Card & Napper Clothing Co., Columbus, Ga.; C. F. Campbell, 1022 Crescent Ave. N. E., Atlanta, Ga.; A. Ben Davis, 2710 Picardy Place, Charlotte, N. C.



**...in SIZE  
and COST**

**-but of utmost importance to YOU!**

Your Ring Travelers directly affect the spindle speeds in your mill and the quality of your yarns. It pays to use the right travelers to perfect your spinning and protect your profits. We make many thousands of different styles and weights of ring travelers and will gladly recommend the right travelers for your use. Write, wire or phone for prompt action. National Ring Traveler Company, Pawtucket, R. I., and Charlotte, N. C.

**STANDARD IN U. S. A.**

American • Hicks • Wilson

**WENTWORTH**

Double Duty • Gravity • Gravity Express • Bal-Ellipsoid

**NATIONAL EARTNEP FINISH**

F. L. Chase, Jr., Pres. & Treas. • L. E. Taylor, So. Mgr.

**NATIONAL**  
RING TRAVELERS

OLDEST AND LARGEST MANUFACTURER OF RING SPINNING AND TWISTING TRAVELERS IN THE UNITED STATES



**WE SPECIALIZE**

In Repairing Fluted Steel Rolls  
Twister Rolls

The Manufacture of New Rolls  
We carry a large stock of Rolls  
for loan or exchange

*Fast Delivery and Installation a Feature of  
Our Service*

**CREASMAN STEEL ROLLER MACHINE CO.**

Wilkinson Blvd.

Gastonia, N. C.

P. O. Box 153

Telephone 5-3967

O. A. Falls, Sec.-Treas.

W. Clyde Marley, Pres.-Mgr.

Mrs. A. G. Creasman, V. P.

**SCOTT TESTERS, INC.**  
Main Office: 89 Blackstone St., Providence 3, R. I.  
Southeastern Sales Representative:  
JOHN KLINCK, 304 West Forest Ave., North Augusta, S. C.  
Southern Service:  
**SCOTT TESTERS (SOUTHERN), INC.**  
216 Reidville Road  
Spartanburg, S. C.

more well rounded with the available talented men in the textile dyeing and finishing industry.

As a manual and reference book it takes after our "British cousins" too much in many of its chapters by attempting to make a textile manual that should have been suitable for the textile plant slightly too "long-haired" and pedantic in its approach.

Outstanding chapters, however, which make the publication worth the cost several times over, are: Chapter II, "Principles of Vat Dye Application;" Chapter VI, "Application to Cotton Packages;" Chapter VII, "Application to Cotton Piece Goods."

A brief critique of some of the chapters follows: Chapter IX, "Application to Fibers Other Than Cotton." This chapter has its strong points but could have eliminated outdated equipment and strengthened the parts on nylon and synthetic fiber dyeing. Chapter X, "General Principles of Printing," and Chapter XI, "Printing." Not as strong as the subject demands though vat colors have been on down grade in consumption for the past decade on prints. Chapter XII, "Indigo." A chapter where new ideas for indigo use may have helped. Chapter XIV, "Leucoesters of Vat Dyestuffs," well written and useful.

Chapter III, "Application to Cotton Raw Stock." The dyeing of wool, rayon, viscose and other fibers should have been included. Chapter IV, "Application to Cotton Skeins," Chapter V, "Application to Cotton Warps," and Chapter VIII, "Hosiery." These are three most potent but smaller users of vat colors in many plants but the report sounds as though it was another college lab report. Chapter XV, "Tabulation of Vat Dyestuffs." Too over-drawn to be of practical value; useful as a reference only. (C. O.)

### Short Course In Statistical Quality Control

A Summer short course in statistical quality control will be offered from July 27 through Aug. 7 at the School of Textiles at Clemson (S. C.) College. The course is designed to give a working knowledge of statistical quality control procedures.

Topics covered in the course include averages and measures of variability; fundamental laws of chance; control charts for averages, ranges, fraction defectives and number of defects per unit; acceptance sampling plans. Stress will be placed on use and application.

The staff for the short course will be: Dr. Hugh M. Brown, dean of the textile school; Dr. R. G. Carson Jr., associate professor of textiles; and Howard L. Loveless, assistant professor of yarn manufacturing. Special lecturers will be brought in to conduct sessions on management aspects of a statistical quality control program.

Total enrollment will be limited to 25 persons; the course will not be held if there are less than ten registrants by July 15. In that event, those who have registered will be notified and any payments refunded. Those wishing information concerning the course may contact Dr. R. G. Carson Jr., School of Textiles, Clemson, S. C.

### N.A.W.M. Told Synthetics Will Help Wool

Development of the new man-made fibers will benefit the woolen and worsted industry, speakers at the man-made fiber panel of the National Association of Wool Manufacturers said. The panel was a feature of the N.A.W.M.'s 88th annual meeting May 7 at the Waldorf

Astoria, New York City. The subject was the place of man-made fibers in the field of woolen and worsted yarns and fabrics.

Seven fibers were discussed by four representatives of chemical fiber producers. They were Dr. Donald F. Holmes, manager, sales development, textile fibers department, E. I. du Pont de Nemours & Co. Inc., Wilmington, Del., nylon, Orlon acrylic fiber and Dacron polyester fiber; Robert E. Smith, acrilan sales manager, Chemstrand Corp., acrilan acrylic fiber; Carl Seterstrom, sales manager, textile fiber department, Carbide & Carbon Chemicals Co., dynel acrylic fiber; and John H. Karrh, manager fiber division, Virginia-Carolina Chemical Corp., vicara protein fiber.

Members of the National Association of Wool Manufacturers elected Everett L. Kent, Kent Mfg. Co., Clifton Heights, Pa., as their new president. Mr. Kent has been in the wool textile business for 42 years and succeeds Ames Stevens, Ames Textile Corp., Lowell, Mass., who was elected a vice-president. Others named as vice-presidents were Francis W. White, president, American Woolen Co., New York, and Lewis A. Hird, treasurer, Samuel Hird & Sons Inc., Garfield, N. J., both incumbents; Kenneth W. Marriner, head of Marriner & Co. Inc., Boston, and Marriner Combing Co., Lawrence, Mass.; and F. W. Tipper of New York, treasurer, Cascade Woolen Mill, Oakland, Me.

Eleven new directors also were elected. They were: Charles E. Dearnley, Dearnley Bros. Worsted Spinning Co. Inc., Philadelphia; Ralph K. Hubbard, Packard Mills Inc., Webster, Mass.; Arthur O. Wellman, Nichols & Co. Inc., Boston; John W. Smith, Parker, Wilder & Co. Inc., New York; Arthur G. Corkery of New York, spun fibers worsted spinning division, American & Efird Mills Inc., Lenoir, N. C.; Aram A. Milot, Paragon Worsted Co., Providence, R. I.; Copeland M. Draper, Draper Bros. Co., Canton, Mass.; Alfred W. Cavedon, Aldon Spinning Mills Corp., Talcottville, Conn.; E. D. Walen, Pacific Mills worsted division, Lawrence, Mass.; R. A. Mitchell, Cyril Johnson Woolen Co., Stafford Springs, Conn., and James F. Dewey, A. G. Dewey Co. Inc., Quechee, Vt.

#### Clark Heads Alabama Textile Executives

Harold M. Clark, superintendent of the Pell City, Ala., unit of Avondale Mills, was elected general chairman of the Alabama Textile Operating Executives at the recent Spring meeting of the group held in Auburn, Ala. Mr. Clark, a graduate of Clemson (S. C.) College, served as vice-chairman of the group last year.

Other new officers are: Grady Webb of the Langdale, Ala., plant of West Point Mfg. Co., vice-chairman; Cleveland Adams of Alabama Polytechnic Institute, textile school dean, secretary and treasurer; and H. S. Price of Opp, Ala., was named a new member of the executive committee.

#### Avisco Sets Up Scholarship At N. C. State

A scholarship to be awarded to a senior-year student at the School of Textiles at N. C. State College has been established by American Viscose Corp., Marcus Hook, Pa., it was announced by Dean Malcolm E. Campbell of the textile school. The scholarship has a value of \$500, and will be awarded to a student to be selected by the school scholarship committee. Criteria for the selection will be scholastic achievement, leadership, personal characteristics, and potential executive ability.

## General Mill Repairs

Manufacturing And Repairing

### STEEL ROLLERS

All Types

### GEARS . . . STUDS

We Specialize In:

WORKMANSHIP

SERVICE and

CUSTOMER

SATISFACTION

We Pick-Up and

Make Prompt Delivery

Satisfaction Guaranteed on all Work

## Piedmont Machine Shops

Incorporated

1401 W. Gaston Ave. Phone 5-5128  
Gastonia, North Carolina

## TEXTILE ENGINEERING

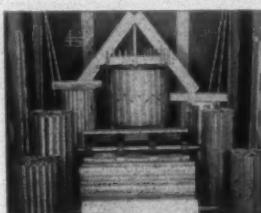
COTTON  
RAYON  
WOOL  
SILK  
NYLON

Plans and designs for all types of projects related to the textile industry. Appraisals, modernization studies, machinery layouts, air-conditioning, power and water filtration plants, and other phases of textile engineering.

## ROBERT AND COMPANY ASSOCIATES

Textile Engineering Division

ATLANTA



## PROMPT SERVICE on

- BEATER LAGS for all makes, fitted to order
- COMPLETE BEATERS—Kirschner and Plate
- ALL TYPE APRONS, both new and reworked, including fireproof aprons

## TODD-LONG PICKER APRON CO.

Gastonia, N.C. Plant 5-4021 Night 5-5149

*Specialists Since 1939 In*  
**TEXTILE CLEARERS**

**TOP CLEARER BOARD**—Made of maple—  
 expertly machined

**PLUSH SCAVENGER ROLL**—A Specialty  
**REVOLVING TOP CLEARER ROLL**—

Featuring uniform covered surfaces  
**CLEARER CLOTH COTS**—Note flat  
 lock seam improvement

"Every Customer a Satisfied One"

**E. F. ROSE & CO.** Maiden, N. C.

★  
 Write for  
 Bulletins on  
 CARDS,  
 DRAWING FRAMES,  
 PERALTAS,  
 FOLDERS, etc.  
 ALSO  
 SPECIAL  
 APPLICATIONS

**ELECTRIC NEUTRALIZER CO.**  
**PORTLAND 6, MAINE**

*Mid-West Representative:*  
 D. H. SPEIDEL, 343 So. Dearborn St., Chicago

*Specialists in the  
 Elimination of . . .*

**STATIC**  
 SAFELY • INSTANTLY

*The* **GASTONIA**  
**MILL SUPPLY CO.**

Industrial, Textile, Electrical and  
 Plumbing Supplies & Equipment



GASTONIA, NORTH CAROLINA

*Industrial Engineers*

SPECIALIZING IN TEXTILES FOR OVER ONE-THIRD OF A CENTURY

PAYROLL CONTROLS COST SYSTEMS  
 SPECIAL REPORTS WORK LOAD STUDIES  
 COST REDUCTION REPORTS

**Ralph E. Loper Co.**

GREENVILLE, S. C.

FALL RIVER, MASS.

**Enka Sets Up Scholarships At N. C. State**

The American Enka Corp. has established four annual scholarships in engineering and textiles at North Carolina State College, Raleigh. Announcement of the new program of scholarship awards was made jointly by Dean J. H. Lampe of the school of engineering and Dean Malcolm E. Campbell of the school of textiles at the college. Each award is to be valued at \$400. Three scholarships will be offered in the fields of civil, chemical, and mechanical engineering and one will be given in textiles.

Deans Lampe and Campbell, in accepting the awards, praised the establishment of the scholarships as building a "closer bond between industry and education in furthering technical training." The college's scholarship committee will select the students to receive the awards. All awards are earmarked for juniors, but students receiving the scholarships in their junior year will be eligible to receive the award as seniors if they maintain a high academic record, the deans said.

The announcement stated that the students will not be asked to make any commitment about future employment. Rules for application will be announced later.

American Enka Corp., one of the nation's leading producers of rayon yarn and which recently began construction of a two-million dollar plant to manufacture nylon, has initiated a scholarship program that will provide for awards at six other major colleges and universities in the South.

**Callaway Establishes Annual Scholarships**

Not one—but up to ten—college scholarships will be awarded annually under the newly-announced Callaway Mills Co. Scholarship Plan. Sponsored by the Callaway Educational Association, the plan is designed to encourage and assist young men and women in the Georgia communities in which Callaway operates to obtain a college education and prepare themselves for positions of community leadership and service.

The scholarships will carry a maximum stipend of \$750 each per school year, or a maximum total of \$3,000 for four years of college work. Applicants must be employees of Callaway Mills, or children or dependents of employees with at least two years of continuous service. They must be graduates of an accredited high school with scholastic records in the upper third of their class.

Administration of the plan and selection of students for the awards will be made by a scholarship plan committee composed of Alvin S. Davis, director of industrial relations, Callaway Mills Co.; Miss Katherine Glass, librarian, research division, Callaway Mills Co.; and Glen M. Simpson, secretary-treasurer, Callaway Community Foundation.

Selection of students will be determined on the basis of character, scholastic record, leadership, participation in student and community activities, co-operation with school authorities, purposes in life and financial need. The plan is described as "another feature of the broad educational and recreational activities being provided for the people of Callaway Mills Co. and its affiliates."

**Tentative Program For A.A.T.C.C. Parley**

The tentative technical program for the 32nd annual convention of the American Association of Textile Chem-

ists & Colorists, to be held Sept. 17-19 at the Conrad Hilton Hotel, Chicago, has been announced by the association. The tentative program follows: Thursday, Sept. 17, 2 to 5 p.m., "Science Fibers," three or four papers and discussion; Friday morning, Sept. 18, 9 a.m. to 12 noon, "Wool," three or four papers and discussion; and "Hosiery," three or four papers and discussion; Friday afternoon, 2 to 5 p.m., the subjects will be "Cotton" and "Textile Auxiliaries" with papers and discussions.

### European Nations Plan Cotton Promotion

Programs to promote sales of cotton textiles are being organized and are expected to be underway in the early future in three of the four major West European countries, Ed Lipscomb, director of sales promotion and public relations, National Cotton Council, reported to the council's board of directors recently. England, France and Sweden already are going ahead with initial plans and top cotton textile leaders in these countries and in Germany, Holland, Belgium, Italy and Switzerland are very much interested in activities to stimulate sales, the council staff member said.

Representatives of textile industries in England, France, Germany, Belgium, Holland and Norway at a recent meeting in Paris formed a West European Cotton Promotion Committee. This group plans to meet each six months, to exchange sales promotion ideas and materials, and to maintain liaison between cotton textile industries in Western Europe.

The Paris conference followed meetings between Mr. Lipscomb and top textile industry officials in each of these countries—England, France, Germany, Italy, Holland, Belgium, Switzerland and Sweden. In these meetings the council's sales promotion director explained the American cotton industry's program, exhibiting samples of National Cotton Council activities, and discussing promotional plans and possibilities for the country concerned.

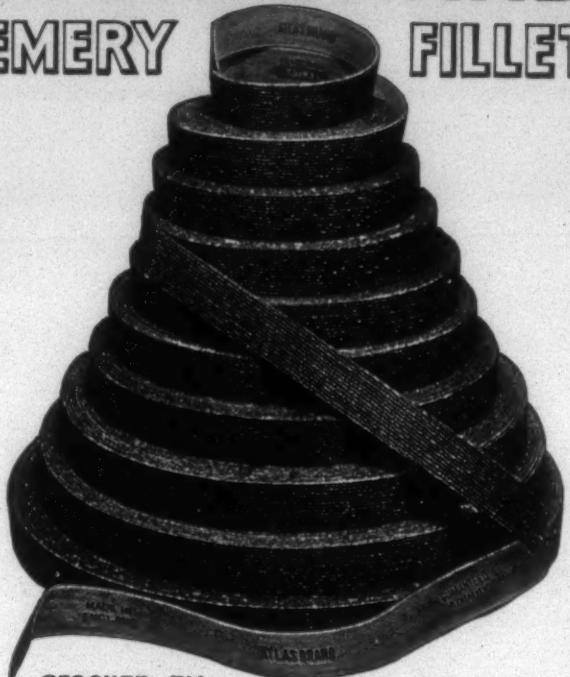
Mr. Lipscomb reported that a grant already has been provided from general funds of the British Cotton Board to get a textile sales promotion program under way.

German cotton spinners, weavers and finishers have organized a German cotton promotion committee and have appointed a sub-committee to make a thorough study of American cotton promotion activities and make specific recommendations. In Sweden the textile sales promotion programs will be initiated as a supplement to public relations efforts for which funds already are available. Other countries are expected to follow the general pattern of the major cotton textile manufacturing nations.

Summarizing the report, Mr. Lipscomb concluded: "The cotton textile industries of the Western world are on the verge of an era of development in which the job of selling cotton products to individual consumers will be recognized and vigorously acted upon as a primary factor in industry progress and welfare.

"In every case where national programs are planned, they are in their infancy. Some, thus far, are not even born. Yet there is absolutely no question that textile leadership is thinking in terms of consumers and consumption, and I think it safe to anticipate that within the next three to five years you and I will see the development of overseas textile sales activity more intensive than any of us could have visualized even a year ago."

## DRONSFIELD'S PATENT ATLAS BRAND EMERY FILLET



STOCKED BY  
**THE PRINCIPAL MILL SUPPLY HOUSES  
AND CARD MAKERS**

### JENKINS RENEEDLING CO., INC.

Largest Reneedling Plant in the World

HALF LAPS AND TOP COMBS

FROM ALL TYPES COTTON AND WOOLEN COMBERS

Reneedled to Factory Specifications

Our Half Laps are guaranteed to contain the correct sizes and quantity of needles to do the best possible job of combing. Your inspection is invited. They also gauge uniformly.

Try our reneedling service and watch your yarn tests improve.

Dial 5-0522

GASTONIA, N. C.

TELEPHONE 5-0371 WORKS N MARIETTA ST

BARKLEY  
MACHINE WORKS  
MANUFACTURERS OF  
TEXTILE MACHINERY  
PARTS

GASTONIA,

NORTH CAROLINA

# Informative Addresses And Relaxing Recreation, That's The Story Of The 1953 S. T. A. Convention

**L**EAVENED by some very practical addresses on industry problems, lightened by much hilarity, and highlighted by a delightfully frank and informative speech by Congressman Charles R. Jonas, (R., N. C.), the 44th annual Southern Textile Association convention, held June 18-20 at Mayview Manor, Blowing Rock, N. C., has been generally described as "one of the best in history."

A total of 400 members and associate members, many of them accompanied by their wives, made up the largest enrollment of any S.T.A. convention ever held at Blowing Rock. The enrollment included 133 mill men, representing 71 different mills, and 267 associate members. The registration was so swelled, in fact, that for a time it seemed that a serious shortage of rooms might dampen the success of the meeting. Co-operation on all sides, however, enabled the problem to be solved so that everyone was accommodated with a minimum of delay.

Beginning Thursday night, June 18, with a social hour, buffet supper, floor show and dancing, the convention moved smoothly through the next day's round of speeches, golf matches, bingo and setback contests, and the social hour, dinner and dancing of the evening. It was climaxed on Saturday morning when Retiring President D. A. Purcell (Fieldcrest Mills, Draper, N. C.), A. Hugh Forster (assistant to the president, Armstrong Cork Co., Lancaster, Pa.), and Congressman Jonas preceded the election of officers with three important speeches.

For officers in the coming year, the S.T.A. chose T. I. Stafford, production manager, Clifton (S. C.) Mfg. Co., as president; J. L. James, manager, Erwin Mills Inc., Cooleemee, N. C., as first vice-president; and James A. Chapman Jr., vice-president, Riverdale Mills, Enoree, S. C., as second vice-president. Retiring President Purcell was named chairman of the board of governors, and to serve with him, the members elected (for three-year terms) Horace Pennington, assistant general manager, Cone Mills Corp., Greensboro, N. C.; A. M. Moore, superintendent, Plant No. 6, Erwin Mills Inc., Durham, N. C.; P. S. Leach, superintendent, Consolidated Textile Corp., Lynchburg, Va.; and D. H. Roberts, superintendent, Lydia Cotton Mills, Clinton, S. C. James McAden Jr., editor of *TEXTILE BULLETIN*, continues as secretary-treasurer.

At a meeting earlier on Saturday morning, the associate members had elected John Foard of Ragan Ring Co., Newton, N. C., as their new chairman, J. E. Spivey of The Textile Shops, Spartanburg, S. C., as vice-chairman, and Junius Smith of *TEXTILE BULLETIN*, Charlotte, N. C., as secretary-treasurer. R. M. Dixon of Barber Mfg. Co., at Charlotte, Lewis Burgess of Crompton & Knowles Loom Works of Charlotte, E. D. Meadows of Meadows Mfg. Co. at Atlanta, Ga., Henry Wood of Hunt Machine Co. at Greenville, S. C., and Fred D. Taylor of Barber-Colman Co. at Greenville, were elected as new representatives on the associate members council.

Carry-overs on the associate members council include

J. V. Ashley of Armstrong Cork Co. at Greenville, W. N. Dulaney of A. E. Staley Mfg. Co. at Atlanta, Haines Gregg of A. B. Carter Inc. at Gastonia, N. C., J. W. Hubbard of Saco-Lowell Shops at Charlotte and Robert Walker of Sykes Inc. at Greenville.

According to one observer, the Friday and Saturday morning addresses were better attended than they have been in years. While the headline name of a congressman no doubt helped to almost fill the auditorium on Saturday morning, the Friday morning session was even better attended, due possibly to the fact that there was only one night of gaiety preceding it. The Friday audience was well rewarded by an informative, well-phrased, and, at times, very witty address, "Worth Street and the Gray Goods Market," by Frank Leslie, Leslie & Co., New York City; and an informative, important treatise, "The Responsibility of Production Supervisors in Waste Control," by James I. Teat, Southeastern Engineering Co., Charlotte.

Though circumstances required that it be arranged at the last minute, members and their wives apparently were well pleased with the floor show entertainment. With June Roberts, New York City entertainer as mistress of ceremonies for both nights, the shows included a variety of acts as tumbling and trampoline performers, a skating act, and a magician whose facility as a pickpocket amazed and delighted onlookers, although his victims may not have felt quite so happy about it.

The most popular recreational function proved to be the golf tournament held Friday afternoon at the Blowing Rock course. Among the mill men, the 75 fired by R. P. Caldwell of Trenton Cotton Mills, Gastonia, was low gross score and won him the trophy presented by Corn Products Refining Co., along with a set of woods. The second low gross went to Dee Trammell of Dora Yarn Mill at Cherryville, N. C., who also had a 75. By the rules of the tournament, Mr. Trammell lost because the five he carded on No. One was not good enough to beat Mr. Caldwell's birdie four. Mr. Trammell won an umbrella as second prize.

Low net score among mill men was carded by W. J. Pennington, Cone Mills Corp., Salisbury, N. C., with a 66. He won a set of irons. Runners-up to Mr. Pennington were Weldon Rogers of Ely & Walker Dry Goods Co. at St. Louis, Mo., and William Pittendreigh of Riegel Textile Corp. at Ware Shoals, S. C., each of whom recorded low nets of 68. Mr. Rogers won a zipper bag and Mr. Pittendreigh a dozen golf balls.

Howard West of Drayton Mills at Spartanburg, whose 114-stroke effort was high gross among mill men, won a wedge for the triumph. J. R. Meikle of Rosemary Mfg. Co., Roanoke Rapids, N. C., managed to use ten strokes on one hole and won six golf balls for that.

A set of woods went to A. E. Johnston Jr. of Ashworth Bros. at Greenville for his low gross 72 among associate members. G. R. Williams of Foster Machine Co. at Char-



Mr. Teat



Mr. Leslie



Mr. Forster



Mr. Jonas

lotte also fired a 72, but was eliminated from the top spot by the rule cited in the Caldwell-Trammell tie. Mr. Williams received an umbrella for his efforts.

Low net score among associates was compiled by Don Marshall of Draper Corp. at Spartanburg, who received a set of woods for his 66. Runner-up to him was Sam Rice with a 67. A zipper bag was his reward. Lee Sibley of Parks-Cramer Co. of Charlotte, who toured the 18 holes in 144 strokes, won a wedge for his high gross score among associates. (It was Mr. Sibley's second golf outing.) Six golf balls were awarded Ralph Schmidt of Greenville (S. C.) Belting Co. for compiling the highest score made on any single hole by associate members.

The convention was not without its moments of anxiety for those responsible for planning the affair. It was learned on Saturday morning that Congressman Jonas had been detained in Washington at an important appropriations committee meeting and probably wouldn't make it to Blowing Rock in time to deliver his talk that morning. It was thus assumed by most of those responsible for the program that Mr. Jonas wouldn't make it. They were therefore very pleasantly surprised when the Congressman's car arrived at the door of Mayview Manor just before Mr. Forster, the morning's other speaker, finished his address.

His appearance at Blowing Rock was something of a double triumph for the Congressman, then, since he had not been able to get away from Washington before 10:30 the night before. He spoke to his audience in an "off-the-cuff" manner, capturing their attention completely as he dispensed with the "double talk" usually expected of men in political life and expressed himself frankly and sincerely on the controversial issues of today. The appreciation of his audience is probably illustrated best by the fact that, although the morning meeting lasted until almost 1:00 p.m., a good portion of his audience remained afterward to discuss other issues with the congressman.

In his speech, Mr. Jonas strenuously defended Secretary of Defense Charles E. Wilson and his much-criticized defense budget, going down the line with Wilson completely in his controversial cut of the appropriations of the Air Force. He pointed out that the Air Force had originally requested a total of \$22 billion for the next fiscal year. The Defense Department under Mr. Truman had cut that figure to \$19 billion, after which the Truman Administra-

tion had taken another cut out of it making the figure \$16 billion. The Air Force had then said, Mr. Jonas stated, that it would try to get along on \$15 billion.

Secretary Wilson made the final cut to \$13 billion, after which former Chief of Staff Hoyt Vandenberg made his spectacular appearance before the Senate Military Appropriations Subcommittee. Pointing out that General Vandenberg has now admitted that the Air Force can have its goal of 143 wings if it receives a total of \$14½ billion—\$1½ billion more than the Wilson budget—Mr. Jonas asked his audience, "I ask you, what happened to the difference between \$22 billion and \$14½ billion? In the final analysis they (the military) will admit that they can live under much less than they are asking."

The congressman also defended the truce which was all but signed in Korea when the anti-Communist prisoners of war were liberated by the South Korean government. "It was most unfortunate for the South Koreans to do what they did," he said. "No matter how imperfect the peace, what was the alternative?" he asked. Mr. Jonas answered his own question by saying that the alternatives were either to pull out of Korea completely, thus admitting defeat, or to start an all-out war which would mean a long conquest of China. Either course would be unwise for the U. S., the congressman said.

"It would be a mistake to cut out the foreign spending program at one fell swoop . . . We are right now in one of the critical stages in world affairs . . . We may be right on the verge of cracking the Iron Curtain," North Carolina's Tenth District representative told his listeners. In this regard, he said that the House Appropriations Committee, on which he serves, had cut the foreign spending program for the next fiscal year from seven billion dollars requested by the Truman Administration to a figure just over \$4,900,000,000. This is probably as far as it should be cut, the congressman believes.

Mr. Jonas stated the aims of the present Administration as three. The first is peace, he said. The second is a sound fiscal policy, and the third is to create in this country a climate that will assure every man opportunity to build for himself and his family a better life. Mr. Jonas strongly asserted his belief that the average American doesn't want the government to lead him by the hand through life.

In his address, "Practical Employee Relations," Hugh



Mr. Delany



Mr. Purcell



Mr. Stafford



Mr. James



Mr. Chapman



Mr. McAden

Forster told his listeners that modern specialization has made Americans lose their sense of self-sufficiency and become more and more interdependent, which, in turn, has brought about a very intense search and desire for security by Americans. The desire for job security has been capitalized upon by labor organizations which have thus grown large and powerful. "No longer is the employee a guy you can push around," said Mr. Forster.

The problem facing management today, said the speaker, is how to maintain efficient operation under this tremendous labor power. There are two schools of thought about the problem, Mr. Forster said. One is the "philosophy of appeasement," which some managements follow because they think they will eventually get a better deal at the bargaining table if they give in to labor. This is a false notion, according to Mr. Forster, because if management is no "pushover," it will actually be easier to bargain with the union.

"The philosophy of appeasement is one in which you give away the principles of prerogatives of management for a few pennies on the wage scale. But you have delivered your employees lock, stock, and barrel into the hands of the union officers." In this statement, Mr. Forster was referring particularly to the closed shop.

Under the policy of appeasement, the speaker said, "Your right to manage the business will be gradually eroded away." He made particular reference to the textile industry in the northeast, saying that "Industry there has been hamstrung . . . by the unions."

The second school of thought on the way that the labor problem should be handled, Mr. Forster said, is one which believes that management has the right to run a business. Labor does not believe this, the speaker said, because the basic aims of labor have been recognized as four: first, more money; second, more straight seniority; third, more union security; and fourth, more voice in management.

If labor continues to attain the first of its goals, more money, "the danger is that labor . . . may force the cost of labor beyond its value," Mr. Forster stated. If the second goal, more straight seniority is granted, the speaker told the textile executives that, "You deny your right to promote people on the basis of ability and skill."

By means of a silent, standing vote, the Southern Textile Association, in its meeting Saturday morning, June 20, passed the following resolution:

"It is with a sense of great loss that the Southern Textile Association records the passing during the last year of F. Gordon Cobb and Marshall Dilling, who were among the founders, officers and life-long supporters of the association. These gentlemen contributed greatly to the growth and success of the association, and will be greatly missed by the membership.

"Therefore, be it resolved, that we, the members of the Southern Textile Association, in annual convention this twentieth day of June, Nineteen Hundred and Fifty-Three, hereby express our profound sympathy to the families of these two men and direct that this resolution be included in the minutes of this association as a token of our love and esteem for them."

The resolution was presented by Smith Crow, Erlanger Mills, Lexington, N. C., past president of the Southern Textile Association.

Labor will not agree there is anything outside the scope of collective bargaining. They believe that every phase of management should be a subject for collective bargaining, he declared. No matter what labor leaders may try to make management believe, Mr. Forster went on, the four goals listed above are their objectives, and they will never abandon them.

"The only basis for peace between labor and management," the speaker said, "is for one side or the other to give up their basic objectives, but a peace in which management gives up its principles means the destruction of American productive industry as we know it."

Because of the intense rivalry between labor and management, Mr. Forster said that good employee relations are more important than ever. There is no magic formula which can give those good relations, he said, and there is no substitute for hard, day-in, day-out, work in arriving at them. He pointed out six requirements, however, that are necessary for good employee relations. The first is an efficient organization, for if the raw materials and tools are not available, the worker will be frustrated and unhappy. The second is an intense desire for good relations. "If you don't want it you're not going to get it," the speaker said. The third requirement is an awareness of employee interests and attitudes, a knowledge of the prevailing feeling in the plant. The fourth is to make sure that the foreman has good policies and that he, himself, is trained and able. The fifth requirement is communication with employees. "You have to explain the why of decisions that affect employees. Explain in advance and do it constantly," Mr. Forster advised. The sixth requirement is to review in advance all management decisions that affect employees before putting them into effect. The possible effect of all decisions must be reviewed. "If you can't keep from making employees angry over any given change, then you've got to sell the change to them," Mr. Forster said. "Narrow is the road . . . that leads to good employee relations," he concluded, "but it is certainly the road which we must follow."

In his retiring address made prior to Hugh Forster's speech, D. A. Purcell, 1952-53 president, warned the textile executives that there is developing a serious shortage of young men graduating with textile degrees and that unless definite steps are taken to correct the situation the trend will continue.

"Last year," Mr. Purcell said, "There were approximately 700 (textile) graduates and this year, 1953, there will be about 500 graduates. This is just the reverse of what it should be. With the textile industry rapidly expanding in the field of synthetics, which within itself calls for more technically trained men, there must be an increase in textile school graduates to supply the demand."

Mr. Purcell pointed out that a recent magazine survey showed that textile executives reached the top quicker and remained their longer than in other industries. Calling on the executives to institute programs to interest high school graduates in a textile education, he said, "In my opinion the textile industry now offers more to the college graduate through the normal working years of life than any other industry . . . We must not shirk our responsibility. If we do, then the textile school enrollment will continue down. On the other hand, if we accept this challenge and do something about it, then we will see a continued increase in textile school enrollment."

A dry, sophisticated wit, and an exact choice of words combined to make Frank Leslie's "Worth Street and the Gray Goods Market" certainly the most charming, and one of the most enjoyable papers that was presented at the convention. And throughout the paper, there exuded the feeling that the man felt a thorough pride, as well as a sentimental and, of course, very practical love for the business and the area which he described.

"Worth Street is more than a market place," he said. "It is a tradition, a state of mind, a reputation, and a way of life in business. It belongs to no one of us; it is an intangible possession of us all. Recently my firm had the usual annual skirmish with the tax department. We were not satisfied with the finding of the tax examiner so we asked for a hearing. The items in dispute were mostly those "non-provable" kind in which the reasonableness of the claim and the integrity of the tax-payer is all important. At the opening of the hearing, the supervisor conducting it made a short statement. He had been with the tax department many years, he said. He was familiar with all the branches of the textile business in his district. Towards most of it he showed the jaded, jaundiced cynicism of an old tax-collector. 'Where you come from,' he said, 'it's quite different. Those old houses are like the Bank of England. We can trust them entirely.' A tradition and a reputation, however intangible, which can impress even a tax-collector has much more than mere sentimental value. I would not wish to relinquish it to become an anonymous row of windows in some skyscraper . . ."

Mr. Leslie also paid tribute to the converters. "We are sorry to see so many of our converting friends leave us. We wanted the proximity, not only for business reasons, but for the inspiration. However, we will surmount the distance . . .

"For it is the converters and finishers who are responsible for the present renaissance in cottons . . . it is they, who by their merchandising and styling—largely determine what share of the customer's dollar the industry gets."

"The supervisor and his duties have changed much during the past decade in our industry," James I. Teat told his audience in a very excellently prepared paper entitled "The Responsibility of Production Supervisors in Waste Control." Reminding the executives of the low-profit margin upon which many mills are now operating, Mr. Teat pointed out that "The savings through effective waste control—as through any other element of cost reduction—can be the difference between selling goods at a profit—or losing a sale . . .

"Yet, strange though it may seem, the savings in waste itself are not the only savings resulting from an effective supervisory program of waste reduction and control. As less waste is made, more goods are produced from the same pounds of raw material and with the same operating costs."

The problem of waste, the speaker said, "must be approached on a mill-wide, concerted-effort basis. Every department in the mill needs, and must have, the help and close co-operation of their productive departments in order to reduce the waste to a minimum, and the control of it within fairly close limits. Poor quality work in any department means more waste in the following department."

Mr. Teat pointed out that probably one of the most universal causes of waste in any plant is the carelessness of employees. He stresses the fact that "they must be sold on the fact that the control of waste is important to each

of them as individuals . . . You sell them by presenting to them the simple and true effects which excessive waste—and the resulting excessive cost—have on the plant's position in an extremely competitive market—and the corresponding effect on their individual job security. Of all the supervisor's responsibilities in waste control, getting this fact over to his employees is of prime importance."

In closing, Mr. Teat asked his listeners, ". . . isn't the supervisor's major responsibility to maintain an alert, questioning attitude toward all the elements of running his job? To look into every source of waste in his department—to search out the causes—to determine the actions needed to correct each cause of excessive waste—and to put these actions into effect with an appropriate follow-up."

### Industry-Wide Steel Strapping Contest

Acme Steel Co., Chicago, announces an industry-wide contest to bring to light new ways in which flat steel strapping can be used to help all industry do a better job of packing, shipping and handling materials. This contest is open to employees and officials of any firm, industry, or organization other than manufacturers of flat steel strapping, their subsidiaries and their advertising agencies.

Each entry will be judged solely on the basis of its value to the user and its possible value to others in the shipping and handling of materials. Awards will be made to those entries which, in the opinion of the judges, are the best examples of successful uses of flat steel strapping (any brand) in improving packing, shipping and materials handling operations.

First grand prize will be an all-expense trip to Bermuda for two or \$1,000 cash. Second grand prize will be \$500 and third grand prize, \$250. Fifteen additional prizes of \$100 each will also be awarded. Contest judges are five men who have distinguished themselves in the packaging, shipping and material handling fields. They will evaluate entries after the close of the contest, midnight, July 20, 1953. These men are Ralph F. Bisbee, Edward J. Dahill, Dr. Spencer A. Larsen, Howard M. Palmer and Paul O. Vogt.

Contest rules specify that entries must be submitted in the name of a single individual on 8½ by 11-inch paper. Photographs and drawings must also be this size. Entries must be accompanied by a properly filled entry blank (or copy). Official entry blanks together with contest rules may be obtained from: Contest Division, Acme Steel Co., 2840 Archer Avenue, Chicago 8, Ill.

Contestants are to describe some successful use of flat steel strapping in shipping or material handling. In supporting their stories, contestants may emphasize: (a) Improvement in safe arrival of goods. (b) Savings in time and money in handling the goods as compared with previous methods—either inside the plant or in shipping. (c) Savings in freight or storage charges, as compared with charges when heavier or bulkier materials were used. (d) Any other savings of any kind, or any new and ingenious solution of a difficult problem with flat steel strapping.

The decisions of the judges will be final, and all entries will become the property of Acme Steel Co.

Middle age is a stage in life requiring women 20 years longer to reach than men.—*Greenville (S. C.) News*.

a  
great  
textile  
selling  
organization

Nation-wide



"SELL AND REPENT"

**Iselin-Jefferson Company, Inc.**

90 WORTH STREET, NEW YORK 13, N.Y.

ATLANTA BALTIMORE BOSTON CHARLOTTE CHICAGO CLEVELAND DALLAS DETROIT

LOS ANGELES MONTREAL NEW ORLEANS PHILADELPHIA ST. LOUIS SAN FRANCISCO

**J. E. SIRRINE CO.**  
GREENVILLE • SOUTH CAROLINA



*Engineers*  
ESTABLISHED 1902

TEXTILE MILLS • RAYON PLANTS • KNITTING MILLS • DYE HOUSES  
BLEACHERIES • STEAM UTILIZATION • STEAM POWER PLANTS  
WATER • WASTE DISPOSAL • APPRAISALS • PLANS • REPORTS

**Package Dyeing and Bleaching**

ALL TYPE COLORS  
ON COTTON YARNS

PIEDMONT PROCESSING CO., Belmont, N.C.

Telephone 352 and 353

## Decline In World Cotton Output Predicted

World production of cotton in the 1953-1954 season will take a downturn, the International Cotton Advisory Committee estimated recently. Earlier indications of an increase in acreage planted to cotton in the United States have been scaled down, I.C.A.C. said, because of unfavorable weather conditions in some parts of the Cotton Belt. But unless there is a serious drop in yield, it appears as if the crop should be about 15 million bales, equal to the previous year's production.

Outside the United States, I.C.A.C. said, the expectation is that production will decline from the 1952-1953 level, and that total world production will be under the 28.4 million bales produced that year. I.C.A.C. said acreage is being reduced because of the necessity to increase food production in some countries, the substantial stocks of cotton in the world, and the fact that planting programs may be influenced more by price factors than a year ago when prices were substantially higher than this Spring.

## Carded Cotton Yarn Stocks Up Slightly

Inventories of carded cotton sales yarn spinners were slightly higher and backlogs of unfilled orders showed further reduction at the end of March operations, the Textile Information Service reports. As of April 4, total yarn in stock, including yarn made for future deliveries against unfilled orders, amounted to 1.06 weeks' production. This compared with stocks equal to 94.9 per cent of a week's output on Feb. 28 and with inventories amounting to 1.561 weeks' production on April 5, 1952.

Unfilled orders on April 4 were equal to 8.39 weeks' production and were 7.91 times the stocks on hand. On Feb. 28, the backlog of unfilled orders was equal to 8.36 weeks' output and was 8.82 times the stocks on hand. The higher ratio of unfilled orders to production, in spite of an actual poundage reduction of nearly two million pounds in backlogs, was due to a lower production rate in the week ending April 4. At the beginning of April a year ago, backlogs were equivalent to 8.69 weeks' production and were 5.56 times the stocks on hand.

According to statistics of the Carded Yarn Association covering reports from approximately 1.4 million member spindles, production in the week ended April 4 consisted of 31.4 per cent knitting yarn, 50.4 per cent weaving yarn, and 18.2 per cent all others. On Feb. 28, the percentages were 32.7, 50.9 and 16.4, respectively, and on April 5, 1952, they were 26.9, 58.7 and 14.4.

An analysis of first quarter 1953 statistics of the association reveals that sales, shipments and production were all on about an even keel for the three months. Total unfilled orders showed only a net reduction of about 200,000 pounds during the quarter while inventories increased about 1,100,-

**J. P. STEVENS & CO., Inc.**  
*fabrics for diversified uses*

STEVENS BUILDING  
Broadway at 41st St., New York 36, N.Y.

000 pounds net. Production for the first quarter consisted of 33.1 per cent knitting yarn, 49.7 per cent weaving yarn and 17.2 per cent all others.

### Other Gains Offset Cotton's Industrial Losses

An 800,000-bale increase in cotton consumption since 1951 in apparel and household uses has more than offset cotton's industrial losses, Dr. M. K. Horne Jr., chief economist of the National Cotton Council, indicated in a report to the council's board of directors. Dr. Horne said that on an over-all basis, if domestic cotton consumption continues at the rate realized for the first nine months, the total for this year will be 9.4 million bales. He broke this estimate down in explaining how cotton sustained important losses in tire cord and bags and still managed a net increase in total, much of it through "straight-out competitive gains."

The council economist said, "The figures tend to show that domestic consumer purchases of cotton apparel and household products are up from 1951 and from the average of recent years by 800,000 bales—an increase of 200,000 bales more than our losses in tire cord and bags."

In citing examples he pointed out that in five recent Fall and Winter months, the total number of men's shirts manufactured was 20 per cent above that same period the previous year and 17 per cent above the average of the four previous years. In dress and sport trousers, production was up 34 per cent from the previous year and 31 per cent above the four-year average. In men's underwear it was up 15 per cent by both comparisons. In the fourth quarter, production of women's dresses was up eight per cent from the previous year and 12 per cent from the four-year average; cotton drapery and upholstery fabrics were up 36 and 26 per cent; towel fabrics up 35 and 11 per cent.

"Available retail figures do not make it possible to determine precisely whether all this production is moving into final consumer hands," Dr. Horne observed, "but the figures suggest that retail purchases have been up substantially from previous years and that any inventory accumulations have been moderate in amount."

He attributed population increases and a high level of economic activity as prime reasons for these apparel and household increases. He then stressed that "straight-out competitive gains" for cotton over other fibers, especially rayon, was a factor of major importance. Available census figures on seven selected men's and women's apparel items show that cotton scored a total gain of 76,000 bales; more than twice what it would have been if cotton had gone forward at the same percentage rate as the other fibers competing in these markets.

### J. W. Valentine Co., Inc.

#### Selling Agents

40 Worth St.

New York City

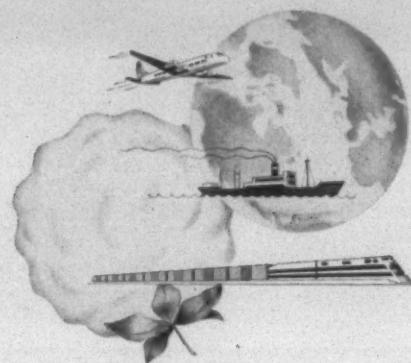
+ + +

Southern Representative

T. HOLT HAYWOOD

Wachovia Bank & Trust Co. Bldg.

Winston-Salem, N. C.



### All the World's a Market for Textiles

In every corner of the globe there's a market for American textiles. Through years of experience, our resident representatives have acquired invaluable knowledge in presenting the products of American Mills.

Combined with full coverage of the American textile market, this broad service affords important distribution for the American Mills we are privileged to serve.

**Joshua L. Baily & Co., Inc.**

40 WORTH STREET, NEW YORK 13, N. Y.



**Do you have shuttle fur problems  
or is cost too high?**

**Give us a try and be convinced that  
we can save you money.**

*Write today for FREE samples and prices.*

**MORRIS FUR CO.**

P. O. Box 816

Burlington, N. C.

### PEGGED and GLUED BRISTLES Stay Put!



**LONGER LIFE**—Spiral card brushes, refilled the Gastonia way, last from 10 to 15 years, compared with 2 or 3 years when staples are used—for STAPLES WILL NOT STAY PUT IN SOFT WOOD. Gastonia first dips the bristles and fiber in glue, then they are permanently pegged in.

**BETTER FINISH**—To prevent lint from collecting on rolls, Gastonia paints them with high-grade bobbin enamel, which dries to a hard, glossy finish. Brushes can be refilled and returned in two days. Freight is paid one way.

J. T. HARRELL, PRES. AND MGR.

**GASTONIA BRUSH COMPANY**

Phone 5-2422

GASTONIA, N. C.

# SOUTHERN SOURCES OF SUPPLY for Equipment, Parts, Material, Service

Following are the addresses of Southern plants, warehouses, offices, and representatives of manufacturers of textile equipment and supplies who advertise regularly in *TEXTILE BULLETIN*. We realize that operating executives are frequently in urgent need of information, service, equipment, parts and materials, and believe this guide will prove of real value to our subscribers.

**ABBOTT MACHINE CO.**, Wilton, N. H. Sou. Plant: Greenville, S. C., L. S. Liggin, Sou. Mgr.

**ADAMS, INC.**, Taylorsville, N. C. S. J. Adams.

**ALDRICH MACHINE WORKS**, Greenwood, S. C. Carolina Reprs.: W. D. Worrell and B. Gates McClintock, Box 1524, Charlotte 1, N. C.; Georgia and Alabama Reprs.: Ben R. Morris, Box 221, Brookhaven, Ga.; Repr. for Air Conditioning and Humidifying Equipment: J. E. Brown, Box 1318, Atlanta 1, Ga.

**ALLEN BEAM CO.**, 156 River Rd., New Bedford, Mass. Sou. Repr.: Joseph Bowler, Jr., 107 McGee St., Tel. 3-3289, Greenville, S. C.

**ALLEN WARPING CO.**, 40 Church St., Lowell, Mass. Sou. Repr.: Woodrow F. Threlley, Route 5, Rosewood, Greenville, S. C.

**AMEROCAUT CORP.**, 4800 Firestone Blvd., South Gate, Calif. Carolinas Reprs.: Southern Specialties Co., 202 Coddington Bldg., Charlotte 2, N. C.

**AMERICAN ANILINE PRODUCTS, INC.**, 50 Union Square, New York 3, N. Y.: Works at Lock Haven, Pa.; Sou. Warehouse and Laboratory: 1500 Hutchison Ave., Charlotte, N. C.; Warehouse and Laboratory, 4001 Rossville Blvd., Chattanooga, Tenn. Sou. Reprs.: J. H. Orr, Mgr., Charlotte, N. C.; George R. Howard, Charlotte, N. C.; Gayle Rogers, Charlotte, N. C.; W. D. Livingston, Greensboro, N. C.; Marion West, Jr., High Point, N. C.; C. O. Starnes, Rome, Ga.; J. T. Bohannon, Jr., and R. W. Freeze, Chattanooga, Tenn.

**AMERICAN MOISTENING CO.**, Providence, R. I. Sou. Plants, Charlotte, N. C. and Atlanta, Ga.

**AMERICAN VISCOSA CORP.**, 250 Fifth Ave., New York City. Sou. Office: 221 S. Church St., Charlotte, N. C. Henry K. Kelly, Mgr.

**ANHEUSER-BUSCH, INC.**, St. Louis, Mo. S. E. Sales Mgr. Corn Products Dept., Charles H. Conner, Jr., 807 Johnston Bldg., Charlotte 2, N. C.

**ANTARA CHEMICAL DIV. GENERAL DYESTUFF CORP.**, 435 Hudson St., New York 14, N. Y.; 2459 Wilkinson Blvd., Charlotte, N. C.

**ARMSTRONG CORK CO.**, 33 Norwood Place, Greenville, S. C. J. V. Ashley, Dist. Mgr., Tel. Greenville 3-5302.

**ARNOLD, HOFFMAN & CO., INC.**, Providence, R. I. Sou. Office, 2130 N. Tryon St., Charlotte 1, N. C. Sou. Sales Mgr.: Dwight L. Turner, 2225 Colony Road, Charlotte, N. C. Salesmen: Willard L. Mills, 2213 Friendly Rd., Greensboro, N. C.; C. Jordan Dulin, 248 Tranquill Ave., Charlotte, N. C.; Philip L. Laviole, care Clement Hotel, Opelika, Ala.; John H. Graham, P. O. Box 904, Greenville, S. C.; William F. Kennedy, Piedmont Apts., Piedmont Rd. at Lindberg Dr., Atlanta, Ga.

**ASHWORTH BROS., INC.**, Fall River, Mass. Sou. Sales and Service Office and Repair Shop, 1201 S. Graham St., Charlotte, N. C. J. M. Reed, Sou. Mgr., T. F. Hart, Sales; Mfg. Plant, Sales Office and Repair Shop, Laurens Rd., Greenville, S. C. A. E. Johnson, Jr., Mgr.; Sales Office and Repair Shop, 357 Forrest Ave., N. E., Atlanta, Ga. J. E. Seacord, Jr., Mgr.; Texas Repr.: Textile Supply Co., Dallas, Tex.

**ATKINSON, HASERICK & CO.**, 211 Congress St., Boston, Mass. Sou. Office and Warehouse, 1639 W. Morehead St., Charlotte, N. C. Tel. 5-1640. Sou. Agt. P. R. Bozeman.

**ATLANTA BELTING CO.**, 508 Whitehall St., S.W., Atlanta, Ga.; Monticello Bobbin Co., Monticello, Ga.

**BAHAN TEXTILE MACHINERY CO.**, Greenville, S. C.

**BAHNSON CO., THE**, 1001 S. Marshall St., Winston-Salem, N. C. Atlanta, Ga., 886 Brewery St., N. E.; Greenville, S. C., P. O. Box 1424.

**BARBER-COLMAN CO.**, Rockford, Ill. Sou. Office, 14 Dunbar St., Greenville, S. C. Fred D. Taylor, Mgr.

**BARKLEY MACHINE WORKS**, Gastonia, N. C.

**BARRELED SUNLIGHT PAINT CO.**, Providence, R. I. C. L. Park, Sou. Dist. Mgr., P. O. Box 446, Tucker, Ga.; Thomas C. Roggenkamp, 435 Wakefield Dr., Apt. B, Charlotte, N. C.; James E. Fentress, 116 Glyndea Rd., Jacksonville, Fla.; P. R. Singletary, 3382 Matheson Rd., N.E., Atlanta, Ga.; Thomas J. Edwards, Jr., 227 Pendleton St., Greenville, S. C., care Ross Builders Supplies, Inc.; Kenneth F. Patterson, 431 Bellview Dr., Falls Church, Va.

**BEST & CO., EDWARD H.**, 222-224 Purchase St., Boston, Mass. Sou. Repr.: W. C. Hames, 185 Pinecrest Ave., Decatur, Ga. Phone Dearborn 5974; William J. Moore, P. O. Box 1970, Greenville, S. C. Phone Greenville 5-4820.

**BIBERSTEIN, BOWLES & MEACHAM, INC.**, Charlotte 4, N. C.

**BRADLEY FLYER & REPAIR CO.**, 1314 W. Second Ave., Gastonia, N. C.

**BRIDGE SONS, JOHN**, 9th and Pennell Sts., Chester, Pa. Sou. Repr.: George A. Howell, Jr., Rockingham, N. C.

**BRYANT-DAVIS ELECTRIC CO.**, Greenville, S. C.

**BRYANT ELECTRIC CO.**, High Point, N. C.

**BRYANT ELECTRIC REPAIR CO.**, 607-9 E. Franklin Ave., Gastonia, N. C.

**BRYANT SUPPLY CO., INC.**, 605 E. Franklin Ave., Gastonia, N. C.

**BULLARD CLARK CO., THE**, Charlotte, N. C., and Danielson, Conn. E. H. Jacobs Southern Division Plant, Warehouse and Office, Box 3096 South Blvd., Charlotte, N. C. Sou. Exec., Edward Jacob Bullard, Pres., and C. W. Cain, V.-Pres. and Gen. Mgr., both of Charlotte, N. C. Sou. Service Engineers: S. B. Henderson, Box 133, Greer, S. C.; L. L. Froneberger, Jr., 523 Woodland Dr., Greensboro, N. C.; Ralph M. Briggs, Jr., 399 Lofton Rd., N.W., Atlanta, Ga.; Frank W. Beaver, Concord, N. C.; Bill Heacock, 315 Popular St., Sylacauga, Ala.; L. J. McCall, 536 Faris Rd., Greenville, S. C.

**BURKART-SCHIER CHEMICAL CO.**, Chattanooga, Tenn. Plants: Chattanooga-Knoxville-Nashville. Sales and Service: C. A. Schier, A. S. Burkart, W. A. Bentel, W. J. Kelly, Jr., George S. McCarty, A. J. Kelly, J. A. Burkart, D. H. Gunther, T. A. Martin, E. F. Jurczak, Lawrence Newman, C. V. Day, care Burkart-Schier Chemical Co., Chattanooga, Tenn.; H. V. Wells, John T. Pigg, J. T. Hill, G. L. Vivrett, care Burkart-Schier Chemical Co., Nashville, Tenn.; Phil H. Swann, George Garner, L. W. Maddux, care Burkart-Schier Chemical Co., Knoxville, Tenn.; James A. Brittain, 3526 Cliff Road, Birmingham, Ala.; O. G. Edwards, P. O. Box 1181, Tryon, N. C.

**BUTTERWORTH & SONS CO., H. W.**, Bethayres, Pa. Sou. Office: 1211 Johnston Bldg., Charlotte, N. C.

**CALGON, INC.**, 323 Fourth Ave., Pittsburgh, Pa. Sou. Offices: J. W. Eshelman & Co., Inc., 2626 Sixth Ave., South Birmingham 5, Ala.; J. W. Eshelman & Co., Inc., 314 Wilder Bldg., Charlotte 2, N. C.

**CAROLINA LOOM REED CO.**, 1000 S. Elm St., Greensboro, N. C.

**CAROLINA REFRACTORIES CO.**, Hartsville, S. C.

**CARTER TRAVELER CO.**, Gastonia, N. C., Division of A. B. Carter, Inc., Gastonia, N. C. Texas Repr.: R. D. Hughes Sales Co., 1812 Main St., Dallas, Tex.

**CHAPMAN ELECTRIC NEUTRALIZER CO.**, Portland 6, Maine. Sou. Repr.: Louis P. Batson Co., Greenville, S. C.

**CHARLOTTE CHEMICAL LABORATORIES, INC.**, Charlotte, N. C. Peter S. Gilchrist, Jr.

**CHARLOTTE LEATHER BELTING CO.**, Charlotte, N. C. Mgr., J. L. Hankey; Sales Reprs.: P. L. Pindell, Charlotte, N. C.; Robert L. Swift, 33 Sevier St., Greenville, S. C.

**CHEMICAL PROCESSING CO.**, P. O. Box 5186, Charlotte, N. C.

**CIBA CO., INC.**, Greenwich and Morton Sts., New York City. Sou. Offices and Warehouse, 1517 Hutchison Ave., Charlotte, N. C.

**CLINTON FOODS INC. (Corn Processing Div.)**, Clinton, Iowa. R. C. Rau, Gen. Sales Mgr., Southeastern Div., Clinton Foods, Inc., 161 Spring St. Bldg., Room 317, Atlanta 3, Ga., Tel. Walnut 8998; John C. Alderson, Asst. Mgr., Atlanta Office; Boyce L. Estes, Atlanta Office; Grady Gilbert, Box 342, Phone 3192 Concord, N. C.; J. Frank Rogers and E. F. Patterson, 900 Woodsid Bldg., Greenville, S. C., Phone 2-8022. Stocks carried at Carolina Transfer & Storage Co., Charlotte, N. C.; Forrest Abbott Co., 117 E. Court St., Greenville, S. C.; Atlanta Service Warehouse, Atlanta, Ga.; Industrial Chemicals, Roanoke Rapids, N. C.

**COCKER MACHINE & FOUNDRY CO.**, Gastonia, N. C. D. L. Friday, V.-Pres. and Gen. Mgr.

**COLE MFG. CO., R. D.**, Newnan, Ga.

**COLEMAN CO., INC.**, Greenville, S. C.

**CORN PRODUCTS SALES CO.**, 17 Battery Place, New York City. Corn Products Sales Co., Southeastern Div., Greensboro, N. C., W. Rouse Joyner, Mgr.; Corn Products Sales Co., Woodside Bldg., Greenville, S. C., J. Alden Simpson, Mgr.; Corn Products Sales Co., Hurt Bldg., Atlanta, Ga.; W. H. Adcock, Mgr.; Corn Products Sales Co., Dermon Bldg., Memphis, Tenn., F. C. Hassman, Mgr.

**CRABB & CO., WM.**, Black Mountain, N. C.

**CREASMAN STEEL ROLLER MACHINE CO., INC.**, Box 153, Gastonia, N. C.

**CROMPTON & KNOWLES LOOM WORKS**, Worcester, Mass. Sou. Offices and Plant: 1505 Hutchison Ave., Charlotte, N. C. John C. Irvin, Sou. Mgr.

**CROMPTON-RICHMOND CO., INC.**, Factors, 1071 Sixth Ave., at 41st St., New York 18, N. Y., Tel. Chickering 4-4210. Subsidiary of Crompton Co., Crompton, R. I.

**CRONLAND WARF ROLL CO.**, Lincolnton, N. C.

**CURTIS & MARBLE MACHINE CO.**, Cambridge St., Worcester, Mass. Sou. Reprs.: Greenville, S. C., 1000 Woodsid Bldg., W. F. Woodward, Tel. 2-7131; Dallas, Tex., O. T. Daniels, care Textile Supply Co.

**CUTLER-HAMMER, INC.**, 315 N. 12th St., Milwaukee 1, Wis. Sou. Offices: 714 Spring St., N.W., Atlanta, Ga., G. E. Hunt, Mgr.; 2014 Stratford Ave.,

Charlotte S. N. C. F. A. Miller, Jr.; 1331 Dragon St., Dallas 2, Tex., E. K. Anderson, Mgr.; 2415 San Jacinto St., Houston 4, Tex., P. O. Green, Mgr.; 508 N. Main St., Midland, Tex.; T. D. Sevar; 833 Howard Ave., New Orleans 12, La., P. C. Hutchinson, Mgr.; 625 Park Lake Ave., Orlando, Fla., W. T. Roundy.

DARY KING TRAVELER CO., Taunton, Mass. Sou. Reprs.: John E. Humphries, P. O. Box 334, Greenville, S. C.; John H. O'Neill, P. O. Box 720, Atlanta, Ga.; James H. Carver, Box 22, Rutherfordton, N. C.; Crawford Rhymer, Box 2261, Greenville, S. C.

DAVIS & FURBER MACHINE CO., North Andover, Mass. Sou. Mocce: Charlotte, N. C.

DAYTON RUBBER CO., THE, Dayton 1, Ohio. Textile Accessory Reprs.: J. O. Cole, P. O. Box 846, Greenville, S. C.; William L. Morgan, P. O. Box 846, Greenville, S. C.; Thomas W. Meighan, 1364 Middlesex Ave., N.E., Atlanta, Ga.; T. A. Sizemore, 526 Grove St., Salisbury, N. C.; E. L. Howell, P. O. Box 846, Greenville, S. C.; Kenneth K. Karns, P. O. Box 846, Greenville, S. C. V-Belt Reprs.: J. M. Hubbard, Dist. Mgr., The Dayton Rubber Co., 1055 Spring St., N.W., Atlanta, Ga.; R. H. Canaday, 106 W. Decatur Ave., Greenville (covers South Carolina Field); H. C. Henderson, 609 Pecan Ave., Charlotte, N. C. (covers North Carolina-Virginia Field); D. C. Greer, The Dayton Rubber Co., 1631-H Valley Ave., Birmingham, Ala.; K. C. Sparks, 1055 Spring St., N.W., Atlanta, Ga.; Jesse H. Jones, 315 Sapelo Rd., Jacksonville, Fla. Textile Jobbers: Greenville Textile Supply Co., Greenville, S. C.; Hall & Co., Spartanburg, S. C.; Odell Mill Supply Co., Greensboro, N. C.; Young & Vann Supply Co. and Mill & Textile Supply, Inc., Birmingham, Ala.; Industrial Supply, Inc., LaGrange, Ga. Dist. Office: 2813 Canton St., Dallas, Tex.

DILLARD PAPER CO., Greensboro, Wilmington, Charlotte, Raleigh, N. C.; Greenville, Columbia, S. C.; Roanoke, Va.; Bristol, Va.; Tenn.; Knoxville, Tenn.; Macon, Augusta, Ga.

DIXIE LEATHER CORP., Albany, Ga. Direct Factory Reprs.: Ed Pickett, Jr., 124 Broadway, Birmingham, Ala.; D. N. Patterson, P. O. Box 176, Greenville, S. C.; W. F. McAnulty, 1240 Romany Rd., Charlotte, N. C.; C. E. Dietzel, 4054 Given St., Memphis 17, Tenn.; H. L. Cook, 3330 Elm St., Dallas, Tex.; D. I. McCready, P. O. Box 7701, Pittsburgh, Pa. Factory Branches: 3330 Elm St., Dallas, Tex., and Preston & Fibert Sts., Philadelphia, Pa., R. W. Davis, Mgr. Warehouse at Batty Machinery Co., Rome, Ga.; Pye-Barker Supply Co., Atlanta, Ga.; Young & Vann Supply Co., Birmingham, Ala.; McGowin-Lyons Hardware Co., Mobile Ala.; Ross Wadick Supply Co., New Orleans, La.; Peerless Supply Co., Shreveport, La.; Weeks Supply Co., Monroe, La.; Textile Mill Supply Co., Charlotte, N. C.; Hugh Black, Greenville, S. C.; Cameron & Barkley Co., Savannah, Ga., Tampa, Fla., Jacksonville, Fla., Miami, Fla., and Charleston, S. C.; Keith Simmons Co., Nashville, Tenn.; Lewis Supply Co., Memphis, Tenn.; Industrial Supplies, Inc., Jackson, Miss.; Taylor Parker Co., Inc., Norfolk, Va.; Industrial Supply, Richmond, Va.; Barker Jennings Hardware Corp., Lynchburg, Va.; Noland Co., Roanoke, Va.

DOLGE CO., THE C. B., Westport, Conn. Sou. Reprs.: L. G. Strickland, R. F. D. 4, Durham, N. C.; George E. Bush, 2404 Belvedere Ave., Charlotte 2, N. C. New England: John H. Barlow, 43 Potters Ave., Providence, R. I.

DRAPER CORP., Hopedale, Mass. Rhode Island Warp Shop Equipment Branch, Pawtucket, R. I. Sou. Office and Warehouses, Spartanburg, S. C.; W. M. Mitchell and Donald Marshall; Atlanta, Ga., 242 Forsyth St., S.W., A. Wilton Kilgore.

DRONSFIELD BROS., Oldham, England: Box 35, Gastonia, N. C.

DU PONT DE NEMOURS & CO., INC., E. I., Electrochemicals Dept., Main Office: Wilmington, Del.; Sou. Dist. Office: 427 W. Fourth St., Charlotte 1, N. C.; LeRoy Kennefick, Charlotte Dist. Mgr.; J. L. Moore, Salesman and Technical Service Mgr., Peroxygen Products Div.; C. W. Rougeux, Salesman, all located at Charlotte address. O. S. McCullers, Sales and Service Repr., 315 E. Faris Rd., Greenville, S. C.; N. P. Arnold, Sales and Service Repr., 2386 Alston Dr., S.E., Atlanta, Ga.; T. M. Harris, Sales and Service Repr., 3630 Peachtree Rd., N.E., Atlanta, Ga.; R. S. Seidel, Sales and Service Repr., 1538 Shoup Court, Apt. 1, Decatur, Ga.

DU PONT DE NEMOURS & CO., E. I., Organic Chemicals Dept., Main Office, Wilmington, Del.; Sou. District Office: 427 W. Fourth St., Charlotte 2, N. C. R. D. Sloan, Mgr.; J. D. Sandridge, Asst. Mgr.; J. V. Killheffer, Laboratory Mgr.; W. I. Pickens, Sales Correspondent; Salesmen: L. N. Brown, H. B. Constable, H. H. Field, M. D. Haney, Jr. Technical Demonstrators: J. J. Barnhardt, Jr., Dr. I. F. Chambers, J. T. Hasty, Jr., W. R. Ivey, G. R. Turner, H. F. Rhoads, F. B. Woodworth, N. R. Vieira. The address for all of the above gentlemen is: E. I. du Pont de Nemours & Co., Inc., P. O. Box 1909, Charlotte, N. C. Salesmen: T. R. Johnson, P. O. Box 876, Greenville, S. C.; J. A. Kidd, 1014 Rotary Drive, High Point, N.C.; J. T. McGregor, Jr., P. O. Box 1080, Greensboro, N. C. Atlanta Office: 1261 Spring St., N.W., Phone Emerson 5391, A. B. Owens, Dist. Mgr.; W. F. Crayton, Asst. Dist. Mgr.; R. H. Lewis, Office Mgr.; L. A. Burroughs, Lab. Mgr.; W. G. Rogers, Asst. Lab. Mgr. Sales Reprs.: Adam Fisher, Jr., R. L. Stephens, P. Park White. Technical Reprs.: J. H. Stradley, J. W. Billingsley, M. S. Williams, Jr., J. A. Darsey, F. P. Zirm. The address of all the above gentlemen is E. I. du Pont de Nemours & Co., Inc., P. O. Box 7265, Sta. C, Atlanta, Ga. Salesmen: A. R. Williams, 1 Belvoir Circle, Chattanooga, Tenn.; M. S. Morrison, Jr., 4222 Holloway Dr., Knoxville, Tenn.; J. A. Verhage, 3155 Given Ave., Memphis, Tenn.; A. W. Pickens, P. O. Box 1068, Columbus, Ga.

EATON & BELL, 904 Johnston Bldg., Charlotte, N. C.; 753 Munsey Bldg., Washington, D. C.

ELECTRIC FURNACE CO., P. O. Box 5282, Charlotte 1, N. C. Repr.: J. S. Livingstone.

EMMONS LOOM HARNESS CO., Lawrence, Mass. Sou. Plant, 2437 Lucena St., Charlotte, N. C.; George A. Field, Mgr.; Arthur W. Harris, Harris Mfg. Co., 443 Stonewall St., S.W., Atlanta, Ga.; W. H. Gibson, 1743 McKinley Ave., San Antonio, Tex.; R. F. "Dick" Coe, P. O. Box 221, Greensboro, N. C.; R. T. "Dick" Osteen, 11 Perry Rd., Greenville, S. C., Phone 2-6941.

ENGINEERING SALES CO., 123-126 W. 29th St., Charlotte, N. C., and Allen Bldg., Greenville, S. C.; S. R. and V. G. Brookshire.

EXCEL TEXTILE SUPPLY CO., Lincolnton, N. C. Reprs.: N. W. Kuray, Lincolnton, N. C.; Paul Kuray, Lincolnton, N. C.; Industrial Suppliers, Inc., LaGrange, Ga.; Fall River Mill Supply Co., Fall River, Mass.; Theodore Huston, 2601 N. Broad St., Philadelphia, Pa.

FERGUSON GEAR CO., Gastonia, N. C.

FORBES CO., WALTER T., Chattanooga, Tenn.

FOSTER MACHINE CO., Westfield, Mass. Sou. Offices, 509 Johnston Bldg., Charlotte, N. C.

GASTON COUNTY DYEING MACHINE CO., Stanley, N. C.

GASTONIA BRUSH CO., Gastonia, N. C.

GASTONIA MILL SUPPLY CO., Gastonia, N. C.

GASTONIA TEXTILE SHEET METAL WORKS, INC., Gastonia, N. C.

GENERAL DYESTUFF CORP., 435 Hudson St., New York City. Sou. Office and Warehouse, 2459 Wilkinson Blvd., Charlotte, N. C.; S. H. Williams, Mgr.

GOSSETT MACHINE WORKS, W. Franklin Ave., Gastonia, N. C.

GRATON & KNIGHT CO., 328 Franklin St., Worcester 4, Mass. Direct Factory Reprs.: Ed Pickett, Jr., 124 Broadway, Birmingham, Ala.; D. N. Patterson, P. O. Box 176, Greenville, S. C.; W. F. McAnulty, 1240 Romany Rd., Charlotte 3, N. C.; C. E. Dietzel, 4054 Given St., Memphis 17, Tenn.; H. L. Cook, 3330 Elm St., Dallas, Tex.; D. I. McCready, P. O. Box 7701, Pittsburgh 15, Pa. Factory Branches, 3330 Elm St., Dallas, Tex., and Preston & Fibert Sts., Philadelphia, Pa., R. W. Davis, Mgr. Warehouse stocks at: Batty Machinery Co., Rome, Ga.; Pye-Barker Supply Co., Atlanta, Ga.; Young & Vann Supply Co., Birmingham, Ala.; McGowin-Lyons Hardware Co., Mobile, Ala.; Ross Wadick Supply Co., New Orleans, La.; Peerless Supply Co., Shreveport, La.; Weeks Supply Co., Monroe, La.; Textile Mill Supply Co., Charlotte, N. C.; Hugh Black, Greenville, S. C.; Cameron & Barkley Co., Savannah, Ga., Tampa, Fla., Jacksonville, Fla., Miami, Fla., and Charleston, S. C.; Keith Simmons Co., Nashville, Tenn.; Lewis Supply Co., Memphis, Tenn.; Industrial Supplies, Inc., Jackson, Miss.; Taylor Parker Co., Inc., Norfolk, Va.; Industrial Supply, Richmond, Va.; Barker Jennings Hardware Corp., Lynchburg, Va.; Noland Co., Roanoke, Va.

GREENSBORO LOOM REED CO., INC., Greensboro, N. C. Phone 2-5678. George A. McFetters, Pres., Phone 4-5333. Reprs.: J. R. "Jimmy" Smith, Phone 3-2074, Greensboro, N. C.; Wm. S. Ward, Phone 3-5916, Greensboro, N. C.

GULF OIL CORP. OF PA., Pittsburgh, Pa. Div. Office, Atlanta, Ga. Reprs.: S. E. Owen, Jr., and C. T. Timmons, Greenville, S. C.; R. G. Burkhalter, Charlotte, N. C.; A. J. Borders, Hickory, N. C.; G. P. King, Jr., Augusta, Ga.; G. W. Burkhalter, Greensboro, N. C.; J. B. Elliott, Hendersonville, N. C.; J. L. Winchell, Raleigh, N. C.; W. A. Dotterer, Florence, S. C.; E. T. Hughes, Columbia, S. C.; C. E. Reese and W. L. Camp, Atlanta, Ga.; R. M. Thibadeau, Macon, Ga. Div. Offices: Boston, Mass.; New York, N. Y.; Philadelphia, Pa.; New Orleans, La.; Houston, Tex.; Toledo, Ohio.

HART PRODUCTS CORP., 1440 Broadway, New York 18, N. Y.

HENLEY PAPER CO. (formerly Parker Paper Co.), Headquarters and Main Warehouse, High Point, N. C.; Warehouse and Sales Division: Charlotte, N. C., Asheville, N. C., Gastonia, N. C., Atlanta, Ga.

HERSEY, HENRY H., 44 Norwood Place, Greenville, S. C. Selling Agent for A. C. Lawrence Leather Co. and New England Bobbin & Shuttle Co.

HOUGHTON & CO., E. F., Philadelphia 33, Pa.

HOWARD BROS. MFG. CO., 44-46 Vine St., Worcester 8, Mass., Phone 6-6207. Reprs.: Harold S. Bolger, 1139-51 E. Chestnut Ave., Philadelphia 38, Pa., Phone GE 8-0600; E. Jack Lawrence, 224½ Forsyth St., S.W., Box 4072, Atlanta, Ga., Phone Walnut 5250; Charles A. Haynes, Jr., 749 Narragansett Parkway, Gaspe Plateau, Providence 5, R. I., Phone Hopkins 1-7679; Carl M. Moore, 219-221 S. Linwood St., Gastonia, N. C., Phone 5-5021; Bruce D. Hodges, Jr., 1204 Craig Ave., Gastonia, N. C., Phone 6-8207. Sou. Plants: Atlanta, Ga., and Gastonia, N. C.; Branch: Philadelphia, Pa.

HUNT LOOM & MACHINE WORKS, INC., 200 Academy St., Greenville, S. C.

IDEAL INDUSTRIES, INC., Bessemer City, N. C., A. W. Kincaid, Mgr.

IDEAL MACHINE SHOPS, INC., Bessemer City, N. C., A. W. Kincaid, Mgr.

JACOBS SOUTHERN & NORTHERN DIV., E. H. (The Bullard Clark Co.), Charlotte, N. C., and Danison, Conn. Sou. Plant, Warehouse and Office, P. O. Box 3069, South Blvd., Charlotte, N. C. Sou. Exec.: Edward Jacobs Bullard, Pres., and C. W. Cain, V-pres. and Gen. Mgr., both of Charlotte, N. C. Sou. Service Engineers: S. B. Henderson, Box 133, Greer, S. C.; L. L. Froneberger, Jr., 523 Woodland Dr., Greensboro, N. C.; Ralph M. Briggs, Jr., 399 Lofton Rd., N.W., Atlanta, Ga.; Frank W. Beaver, Concord, N. C.; Bill Heacock, 315 Popular St., Sylacauga, Ala.; L. J. McCall, 536 E. Faris Rd., Greenville, S. C.

JARRELL MACHINE CO., W. G., 1200 S. Mint St., Charlotte, N. C.

JARRETT CO., CECIL H., Newton, N. C.

JENKINS METAL SHOPS, INC., Gastonia, N. C.

JENKINS RENEEDLING CO., INC., Gastonia, N. C.

JOHNSON, CHARLES E., Paterson, N. J. Sou. Repr.: T. E. Lucas Associates, Inc., 117 E. Third St., Charlotte, N. C.

KEEVER STARCH CO., Columbus, Ohio. Charles C. Switzer, Textile Sales Mgr., 1200 South Carolina National Bank Bldg., Greenville, S. C.; Luke J. Castle, 3015 Forest Park Dr., Charlotte, N. C.; Robert E. DeLapp, Jr., Greenville, S. C., Office: E. Hays Reynolds, Greenville, S. C. Office: F. M. "Ted" Wallace, 804 College Ave., Homewood, Birmingham, Ala. Sou. Warehouses, Charlotte, N. C., and Greenville, S. C.

KENNEDY CO., W. A., 1814 S. Tryon St., Charlotte, N. C.

KLUTZ MACHINE & FOUNDRY CO., Gastonia, N. C.

LANDIS, INC., OLIVER D., 718 Queens Rd., Charlotte 7, N. C. Fred E. Ant-

## SOUTHERN SOURCES OF SUPPLY

LEY, P. O. Box 802, Greenville, S. C., South Carolina, Ga., Ala., Tenn. and Va. Repr.

LAUREL SOAP MFG CO., 2607 E. Tioga St., Philadelphia, Pa. Sou. Repr.: A. Henry Gaede, P. O. Box 1083, Charlotte, N. C.

LEAGUE MFG. CO., G. F., P. O. Box 125, Greenville, S. C.

LIPPARD, JOHN B., 513 S. Tryon St., Charlotte, N. C.

LIVERMORE CORP., H. F., Alston Station, Boston 34, Mass. Executive Offices and Plant, Boston 34, Mass. Sou. Div. H. F. Livermore Corp., 123-125 Henry St., Greenville, S. C. Sou. Reprs.: Ernest W. Fanning, 407 Jefferson Ave., East Point, Ga.; Charlie E. Moore, 2323 Morton St., Charlotte, N. C.; William T. Jordan, 34 Woodvale Ave., Greenville, S. C.

LOPER CO., RALPH E., 500 Woodsidde Bldg., Greenville, S. C. New England Office, Buffington Bldg., Fall River, Mass.

MCCASKIE, INC., WILLIAM, Forge Road, Westport, Mass.

MCLEOD LEATHER & BELTING CO., Greensboro, N. C.

MANTON GAULIN MFG. CO., INC., 51 Garden St., Everett 49, Mass. Sou. Repr.: W. A. Hewitt, P. O. Box 981, Greenville, S. C.

MARSHALL & WILLIAMS SOUTHERN CORP., 121 Welborn St., P. O. Box 1491, Greenville, S. C., Tel. Greenville 2-7338.

MARTHA MILLS DIVISION, Silvertown, Ga. Sou. Sales Agents: Walter T. Forbes Co., Chattanooga, Tenn.

M-B PRODUCTS, 46 Victor Ave., Detroit 3, Mich. Sou. Reprs.: Virginia, South Carolina and Tennessee, Wilson F. Hurley, P. O. Box 1443, Greenville, S. C.; Georgia, Alabama and Mississippi, J. W. Davis, P. O. Box 745, Columbus, Ga.; Texas and Arkansas, R. D. Hughes Sales Co., 1812 Main St., Dallas, Tex.; North Carolina, Charlotte Supply Co., Charlotte 1, N. C. (Supply House).

MEADOWS MFG. CO., P. O. Station A, Atlanta, Ga. N. C. Repr.: Walter S. Coleman, P. O. Box 732, Salisbury, N. C.; S. C. Repr.: G. F. (Jack) Stanley, 211 Cleveland St., Box 1351, Greenville, S. C.; Ga. and Ala. Repr.: Sam R. Hogg, Atlanta, Ga. Jobbers: Matthews Equipment Co., 93-A Broadway, Providence, R. I.; Coleman Co., Inc., P. O. Box 3597, Greenville, S. C.; Tennessee Bearings, Inc., Knoxville, Tenn.

METRO-ATLANTIC, INC., Centredale, R. I. Sou. Office: 1201 South Carolina National Bank Bldg., Greenville, S. C.

MILL DEVICES CO., Gastonia, N. C. R. D. Hughes Sales Co., 1812 Main St., Dallas, Tex., Texas and Arkansas: Eastern Repr.: (including Canada) C. E. Herrick, 44 Franklin St., Providence, R. I.; European Repr.: Mellor, Bromley & Co., Ltd., Leicester, England.

MORRIS FUR CO., P. O. Box 816, Burlington, N. C.

NATIONAL ANILINE DIVISION, Allied Chemical & Dye Corp., Gen. Office, 40 Rector St., New York 6, N. Y. Julian T. Chase, Res. Mgr.; Kenneth Mackenzie, Asst. to Res. Mgr., 201 W. First St., Charlotte, N. C. Salesmen: Wyss L. Barker and Harry L. Shinn, 201 W. First St., Charlotte, N. C.; Geo. A. Artope and R. F. Morris, Jr., Jefferson Standard Bldg., Greensboro, N. C.; H. A. Rogers and Chas. A. Spratt, 1202 James Bldg., Chattanooga 2, Tenn.; J. K. Boykin, American Savings Bank Bldg., Atlanta, Ga.; W. H. Jackson, 213 Columbus Interstate Bldg., Columbus, Ga.; A. Jones, Jr., 408 Cotton Exchange Bldg., New Orleans, La.; Henry A. Cathey, 403 E. Franklin St., Room 210, Richmond, Va.

NATIONAL FLOOR PRODUCTS CO. Sou. Office: 105 Forrest Ave. Bldg., Atlanta, Ga.

NATIONAL RING TRAVELER CO., Frederic L. Chase, Jr., Pres. and Treas., 354 Pine St., Pawtucket, R. I. Sou. Office and Warehouse, 131 W. First St., Charlotte 1, N. C. Sou. Mgr., L. E. Taylor, Charlotte, N. C. Sou. Sales Engineers: Donald C. Creech, P. O. Box 1723, High Point, N. C.; Frank S. Beacham, P. O. Box 281, Hones Path, S. C.; T. Hill Ballard, 131 W. First St., Charlotte, N. C.

NATIONAL STARCH PRODUCTS, INC., 270 Madison Ave., New York 16, N. Y. Sou. Reprs.: National Starch Products, Inc., 194-210 Haynes St., N.W., Atlanta, Ga.; Fred N. Eastwood; Howard Smith, 2025 Peachtree Rd., N.E., Atlanta, Ga.; Ira L. Dowd, 1800 Sprague Ave., Charlotte, N. C.; Tom Griffin, 3706-A Skyline Dr., Chamblee, Ga.; D. R. Lassiter, 26 Jefferson Apt., Rockingham, N. C.

NEW ENGLAND BOBBIN & SHUTTLE CO., 30 Crown St., Nashua, N. H. Sou. Reprs.: Henry H. Hersey, Norwood Place, Greenville, S. C.; Harris Mfg. Co., 443 Stonewall St., S.W., P. O. Box 1982, Atlanta, Ga.; Charlotte Supply Co., Charlotte, N. C.

N. Y. & N. J. LUBRICANT CO., 292 Madison Ave., New York, N. Y. Sou. Office and Warehouse: 634 S. Cedar St., Charlotte, N. C., Phone 3-7179; Lewis W. Thomason, Jr., Sou. Dist. Mgr., P. O. Box 576, Charlotte, N. C. Sales and Service Engineers: Fred W. Phillips, P. O. Box 782, Greenville, S. C.; James A. Sorrells, Jr., P. O. Box 576, Charlotte, N. C.; Fred Winecoff, Greensboro, N. C.; Aubrey M. Cowan, P. O. Box 563, Lanett, Ala. Warehouses: Charlotte, N. C., Greensboro, N. C., Greenville, S. C., Atlanta, Ga., Columbus, Ga., Birmingham, Ala.

NOBLE CO., ROY, P. O. Box 137, New Bedford, Mass. Sou. Repr.: John P. Batson, P. O. Box 341, Greenville, S. C. Batson Mfg. Co., Inc., Tel. 5-1634 or 2-5938.

NORLANDER-YOUNG MACHINE CO., New Bedford, Mass. Sou. Plant, York Road, Gastonia, N. C.

NORRIS BROS., Greenville, S. C.

NORTH, INC., FRANK G., P. O. Box 123, Sta. A, Atlanta, Ga., Tel. Raymond 2196; P. O. Box 92, Marietta, Ga., Tel. 1509, Reprs.: Chas. B. Elliott, Box 433, Griffin, Ga., Tel. 4014; Raymond J. Payne, Box 6000, Charlotte 7, N. C., Tel. 6-2025; A. V. McAllister, Box 324, Greenwood, S. C., Tel. 7668; J. C. Alexander, Box 56, Spartanburg, S. C., Tel. 5563; Frank G. North, Pres., and Mark W. Mayes, V-Pres., Atlanta, Ga.

OAKITE PRODUCTS, INC., General Office: 22 Thames St., New York 6, N. Y. Sou. Div. Office: Oakite Products, Inc., 317 Palmer Bldg., Atlanta 3, Ga., W. A. Baitzell, Mgr. Sou. Reprs.: G. Tatum, 3607 S. Court St., Montgomery 6, Ala.; H. W. Cole, 209 W. First St., Charlotte 2, N. C.; D. B. Lamb, 1133 Albert St., Knoxville 17, Tenn.; L. T. Prince, 328 Davie St., Greensboro, N. C.; O. D. Riddle, Jr., 317 Palmer Bldg., Oakite Products, Inc., Atlanta 3, Ga.; F. W. Weldon, P. O. Box 976, Birmingham 1, Ala.; H. W. Hatley, 729 E. 53rd St., Savannah, Ga.; B. F. Swint, Lewis Village, P. O. Box 1271, Greenville, S. C.

ORR FELT & BLANKET CO., THE, Piqua, Ohio. Sou. Repr.: Oliver D. Landis, Inc., 718 Queens Rd., Charlotte 7, N. C.

FABST SALES CO., 221 N. LaSalle St., Chicago 1, Ill. Sou. Repr.: C. H. Patrick, P. O. Box 300, Salisbury, N. C., Phone 1066. Sou. Warehouse, Textile Warehouse Co., Greenville, S. C.

PEASE & CO., J. N., 119½ E. Fifth St., Charlotte, N. C.

PENICK & FORD, LTD., INC., 420 Lexington Ave., New York City; Cedar Rapids, Iowa, P. G. Wear, Sou. Sales Mgr., 806 Bond, Allen Bldg., Atlanta 3, Ga.; J. H. Almond, Glenn M. Anderson, W. J. Kirby, Atlanta Office: Guy L. Morrison, L. C. Harmon, Jr., 902 Montgomery Bldg., Spartanburg, S. C.; T. H. Nelson, Charlotte, N. C.; W. R. Brown, 1214 Liberty National Bank Bldg., Dallas, Tex. Stocks carried at convenient points.

PERFECTING SERVICE CO., THE, 332 Atando Ave., Charlotte, N. C. Offices in Atlanta, Chicago, Cleveland, Philadelphia, Providence, New York, Montreal, and Toronto.

PERKINS & SON, INC., B. F., Holyoke, Mass. John L. Perkins, III, Vice-President in Charge of Sales.

PHILADELPHIA QUARTZ CO., Public Ledger Bldg., Philadelphia 6, Pa. Sou. Reprs.: F. Homer Bell, 2624 Forest Way, N.E., Atlanta 5, Ga.; Richard D. Greenway, 1016 Guilford Rd., Charlotte, N. C. Textile Distributors: Southern States Chemical Co., Atlanta, Ga.; F. H. Ross & Co., Inc., Southern States Chemical Co., Charlotte, N. C.; Southern States Chemical Co., Greenville, S. C.; Marlow-Van Loan Corp., High Point, N. C.; Taylor Salt & Chemical Co., Norfolk, Va.; Taylor Salt & Chemical Co., Charlotte, N. C.; Wittichen Chemical Co., Inc., Birmingham, Ala.

PIEDMONT MACHINE SHOPS, INC., 1401 W. Gaston Ave., Gastonia, N. C.

PIEDMONT PROCESSING CO., Belmont, N. C. Tel. 352-353.

PILOT LIFE INSURANCE CO., Jos. F. Freeman, Vice-President in Charge of Group Department, Greensboro, N. C.

PNEUMAFIL CORP., 2516 Wilkinson Blvd., Charlotte, N. C. Sales Offices: Boston, Philadelphia, Atlanta.

PRECISION GEAR & MACHINE CO., Charlotte, N. C.

RAGAN RING CO., Atlanta, Ga. N. C. Repr.: John H. Foard, Box 574, Newton, N. C.

RAYBESTOS-MANHATTAN, INC., GENERAL ASBESTOS & RUBBER DIV., Passaic, N. J. Factory: North Charleston, S. C. Southern Distributors: Alabama—Teague Hdw. Co., Montgomery; Anniston Hdw. Co., Anniston; Long-Lewis Hdw. Co., Birmingham; Gadson Hdw. Co., Gadson; Georgia-American Mch. Supply Co., Atlanta; Bibb Supply Co., Macon, Kentucky—Craft-Pelle Co., Louisville, North Carolina—Charlotte Supply Co., Charlotte; Dillon Supply Co., Raleigh, Durham and Rocky Mount; Kester Mch. Co., Winston-Salem, High Point and Burlington, South Carolina—The Cameron & Barkley Co., Charleston; Carolina Supply Co., Greenville; Columbia Supply Co., Columbia; Montgomery & Crawford, Inc., Spartanburg; Sumter Mch. Co., Sumter; Tennessee-Chattanooga Bldg. & Sup. Co., Chattanooga; Summers Hdw. & Sup. Co., Johnson City; Power Equipment Co., Knoxville; Buford Bros., Inc., Nashville; Lewis Supply Co., Memphis, Virginia—Industrial Supply Corp., Richmond.

REINER, INC., ROBERT, 550-64 Gregory Ave., Weehawken, N. J. Sou. Repr.: John Klinck, 304 W. Forest Ave., North Augusta, S. C. (Creels, Warpers and Beamers), and H. Walter Fricke, Box 9155, Charlotte, N. C. (Hosiery Machines).

RHOADS & SONS, J. E., 35 N. Sixth St., Philadelphia, Pa. Sou. Office: J. E. Rhoads & Sons, 88 Forsyth St., S.W., Atlanta, Ga., P. O. Box 4305. C. R. Mitchell, Mgr. Sou. Repr.: J. Warren Mitchell, P. O. Box 1539, Greenville, S. C.; A. S. Jay, P. O. Box 627, Sylvacauga, Ala.; J. T. Hoffman, P. O. Box 4305, Atlanta, Ga.; L. H. Schwoebel, 615 Roslyn Rd., Winston-Salem, N. C.; Textile Supply Co., 301 N. Market St., Dallas, Tex.

RICE DOBBY CHAIN CO., Millbury, Mass. Sou. Repr.: R. E. L. Holt, Jr., Associates, P. O. Box 1474, Jefferson Bldg., Greensboro, N. C.

ROBERT & CO. ASSOCIATES, Atlanta, Ga.

ROSE & CO., E. F., Maiden, N. C.

ROY & SON CO., B. S., Worcester, Mass. Sou. Office and Supply Depot: Linwood and 2nd Sts., Gastonia, N. C.; W. F. Crowder, Sou. Distributors: Odell Mill Supply Co., Greensboro, N. C.; Textile Mill Supply Co., Charlotte, N. C.; Textile Supply Co., Dallas, Tex.

ROYCE CHEMICAL CO., Carlton Hill, N. J. Sou. Repr.: Irving J. Royce, 200 Belvedere Ave., Charlotte, N. C.

SACO-LOWELL SHOPS, 60 Batterymarch St., Boston, Mass. Sou. Office and Supply Depot, New Haven, N. C.; J. W. Hubbard (in charge), H. M. Walsh, Sou. District Service Mgr., E. T. Canaler, Selling Agent; Atlanta, Ga., 101 Marietta St., Herman J. Jones (in charge), M. A. Comer, Selling Agent; Greenville, S.

C., Woodside Bldg., C. S. Smart, Jr. (in charge), J. W. Dickert, Selling Agent; Greensboro, N. C., P. O. Box 1994, Fletcher S. Culpepper (in charge), W. A. Thomason, Jr., Selling Agent.

**SANDOZ CHEMICAL WORKS, INC.**, 61 Van Dam St., New York 13, N. Y. Sou. Office: 1510-12 Camden Rd., Charlotte, N. C., A. T. Hanes, Jr., Mgr.

**SCOTT TESTERS, INC.**, Main Office: 89 Blackstone St., Providence 5, R. I. Southeastern Sales Representative: John Klinck, 304 W. Forest Ave., North Augusta, S. C. Southern Service: SCOTT TESTERS (Southern) INC., 218 Reidville Rd., Spartanburg, S. C.

**SEYDEL-WOOLLEY & CO.**, 748 Rice St., N.W., Atlanta, Ga., Phone Elgin 5887, Vasser Woolley, Pres. Reprs.: John R. Seydel, V. R. Mills, A. Dillon, Atlanta, Ga.; W. L. Whisnant, Concord, N. C.; W. H. Cutts, Greensboro, N. C.; Wellings La Grange, Greenville, N. C., in the Wetting and Finishing Div.; Dr. Paul V. Seydel, David Meriwether, Atlanta, Ga.; J. E. Spearman, Charlotte, N. C. Northern and Export Repr.: Standard Mill Supply Co., 1064-1090 Main St., Pawtucket, R. I. (conditioning machinery and penetrants only). Southwest Repr.: O. T. Daniel, Textile Supply Co., 1602 Cedar Springs, Dallas, Tex.

**SIGNAL THREAD CO., INC.**, Chattanooga, Tenn.

**SIMS METAL WORKS**, West Point, Ga.

**SINCLAIR REFINING CO.**, Dist. Office, 573 Peachtree St., P. O. Box 1710, Atlanta, Ga., F. W. Schwettmann, Mgr., Lubricating Sales; G. R. Dyer, Mgr. Industrial Sales. Area Offices: Atlanta, Ga., Birmingham, Ala., Jacksonville, Fla., Miami, Fla., Tampa, Fla., Columbia, S. C., Charlotte, N. C., Nashville, Tenn., Jackson, Miss., Montgomery, Ala., Raleigh, N. C. Industrial Lubricating Engineers: J. M. Mathers, Columbia, S. C.; T. F. Morrison, Charlotte, N. C.; J. O. Holt, 1220 Dixie Trail, Raleigh, N. C.; W. H. Lipscomb, 414 McIver St., Greenville, S. C.; R. A. Smith, 121 Island Home Blvd., Knoxville, Tenn., C. C. Nix, 1926 Sixteenth Ave., So., Birmingham, Ala.; T. A. Crossley, Montgomery, Ala.; L. M. Kay and H. G. Lane, 332 Eighth St., N.E., Atlanta, Ga., and H. H. Terrell, P. O. Box 131, Lakeland, Fla.

**SIPP-EASTWOOD CORP.**, Main Office and Factory, 40 Keen St., Paterson, N. J. Sou. Office: S. Fred Toll, 2116 West Morehead St., Charlotte, N. C.

**SIRRINE CO., J. E.**, Greenville, S. C.

**SOLVAY PROCESS DIVISION, ALLIED CHEMICAL & DYE CORP.**, 40 Rector St., New York, N. Y. Sou. Branch: 212 S. Tryon St., Charlotte, N. C.; H. W. Causey, Branch Mgr. Sou. Reprs.: Earl H. Walker, High Point, N. C.; Richard Hoyt, 1216 Edgewood Ave., Jacksonville, Fla.; Robert P. Baynard, Charlotte, N. C.; Charles E. Varn, 307 Elmwood Dr., Greensboro, N. C.

**SOMERVILLE-SEYBOLD DIVISION OF HENLEY PAPER CO.**, 700 Murphy Ave., S.W., Atlanta, Ga.

**SONOCO PRODUCTS CO.**, Hartsville, S. C.

**SOUTHERN ELECTRIC SERVICE CO.**, Charlotte, Greensboro, N. C.; Greenville, Spartanburg, S. C.

**SOUTHERN SHUTTLES DIV.**, Steel Heddle Mfg. Co., Main Office and Plant, 2100 W. Allegheny Ave., Philadelphia 32, Pa., Greensboro Office, 903-904 Guilford Bank Bldg., P. O. Box 1917, Greensboro, N. C. Claude W. Cain, Dist. Mgr.; Dan M. Culp, Ralph L. Parker and Richard B. Stevens, Sales Reprs. Greenville Office and Plant and Southern Shuttles Div., P. O. Box 1899, Greenville, S. C.; J. J. Kaufmann, Jr., V-Pres. and Mgr. of Southern Divisions; Henry P. Goodwin, Sou. Dist. Sales Mgr.; Davis L. Batson, Dist. Mgr. Greenville "A" Territory; Sam R. Zimmerman, Jr., Dist. Mgr. Greenville "B" Territory; Hugh I. Cash and John M. Neuffer, Sales Reprs. Atlanta Office and Plant, 268 McDonough Blvd., Box 1496, Atlanta, Ga., Dave W. G. MacIntyre, Dist. Mgr.; Brumley D. Pritchett and James C. Jacobs, Sales Reprs.

**SOUTHERN SIZING CO.**, Pioneer Div. Scott & Williams, East Point, Ga.

**SOUTHERN TEXTILE WORKS**, P. O. Box 406, 202 S. Towers St., Anderson, S. C.

**STALEY MFG. CO., A. E.**, Decatur, Ill. Sou. Office, 1616 Rhodes-Haverty Bldg., Atlanta, Ga., W. N. Dulaney, Southeastern Mgr.; Dan S. Miller, Asst. Mgr. Sou. Reprs.: H. A. Mitchell, Montgomery Bldg., Spartanburg, S. C.; W. T. O'Steen, Rt. 5, Greenville, S. C.; Donald A. Barnes, 456 Sedgefield Rd., Charlotte, N. C.; L. A. Dillon, 1616 Rhodes-Haverty Bldg., Atlanta, Ga.; Nelson N. Harte, Jr., 1616 Rhodes-Haverty Bldg., Atlanta, Ga.

**STANLEY WORKS, THE**, New Britain, Conn. Sales Reprs.: G. H. Little, Harrison Bldg., Room 414, 4 S. 15th St., Philadelphia, Pa., Tel. Rittenhouse 9977; G. R. Douglas, 707 Columbian Mutual Towers, Memphis 3, Tenn., Tel. 8-7117; M. A. Hawkins, 3803 General Taylor St., New Orleans 15, La., Tel. Magnolia 5353; H. C. Jones, Joe A. Dickson, W. L. Tolson, Jr., care The Stanley Sales Co., 410 Candler Bldg., Atlanta, Ga., Tel. Lamar 4651; G. J. McLernon, 209 Hubbard St., San Antonio 2, Tex., Tel. Travis 3563; Charles J. Turpie, Jr., 1500 Scott Ave., Charlotte, N. C., Tel. 3-7051; T. P. West, Jr., 10 Seminole Dr., Greenville, S. C., Tel. 3-5932; G. E. Richter III, P. O. Box 8218, Chattanooga, Tenn.

**STEEL HEDDLE MFG. CO.**, Main Office and Plant, 2100 W. Allegheny Ave., Philadelphia 32, Pa., Greensboro Office, 903-904 Guilford Bank Bldg., P. O. Box 1917, Greensboro, N. C. Claude W. Cain, Dist. Mgr.; Dan M. Culp, Ralph L. Parker and Richard B. Stevens, Sales Reprs. Greenville Office and Plant and Southern Shuttles Div., P. O. Box 1899, Greenville, S. C.; J. J. Kaufmann, Jr., V-Pres. and Mgr. of Southern Divisions; Henry P. Goodwin, Sou. Dist. Sales Mgr.; Davis L. Batson, Dist. Mgr. Greenville "A" Territory; Sam R. Zimmerman, Jr., Dist. Mgr. Greenville "B" Territory; Hugh I. Cash and John M. Neuffer, Sales Reprs. Atlanta Office and Plant, 268 McDonough Blvd., Box 1496, Atlanta, Ga., Dave W. G. MacIntyre, Dist. Mgr.; Brumley D. Pritchett and James C. Jacobs, Sales Reprs.

**STEIN, HALL & CO., INC.**, 285 Madison Ave., New York, N. Y. Charlotte Office: 1820 W. Morehead St., Charlotte, N. C.; F. W. Perry, Mgr., P. O. Box 809; N. C., Va. and Tenn. Reprs.: W. S. Gilbert, Charlotte, N. C.; S. C. Reprs.: Crawford H. Garren, P. O. Box 303, Pendleton, S. C.; Atlanta Office: 80 W. Peachtree Place, N.W., Atlanta, Ga., E. D. Estes, Mgr., 1257 Durand Drive, N.W.; Ala. Repr.: J. E. Myrick, 302 24th St., Tuscaloosa, Ala.; Ga. Repr.: Rodney Simpson, 81 Peachtree Pl., N. W., Atlanta, Ga.

**STERLING RING TRAVELER CO.**, 101 Lindsay St., Fall River, Mass. Sou. Reprs.: M. H. Cranford, 135 Walnut St., Chester, S. C.; D. R. Investor, Clarkesville, Ga.

**STEWART MACHINE CO.**, Gastonia, N. C.

**TATUM MFG. CO.**, Eastford, Conn. Sou. Reprs.: Greenville Belting Co., Greenville, S. C.

**TERRELL MACHINE CO., THE**, Charlotte, N. C. E. A. Terrell, Pres., W. S. Terrell, Sales Mgr.

**TEXAS CO., THE**, New York, N. Y. Dist. Offices, Box 301, Norfolk, Va., and Box 1722, Atlanta, Ga. Bulk Plants and Warehouses in all principal cities. Lubrication Engineers: P. C. Bogart, Norfolk, Va.; W. H. Goebel, Roanoke, Va.; F. M. Edwards, Raleigh, N. C.; W. P. Warner, Greensboro, N. C.; C. W. Meadors, Charlotte, N. C.; J. E. Buchanan, Munsey Bldg., Baltimore, Md.; J. H. Murfee, Greensboro, N. C.; G. B. Maupin, Greensboro, N. C.; C. T. Hardy, Durham, N. C.; H. E. Meunier, Charlotte, N. C.; S. L. Purches, Goldsboro, N. C.; A. C. Keiser, Jr., Birmingham, Ala.; F. A. Boykin, Jr., Birmingham, Ala.; J. B. Hatfield, Montgomery, Ala.; L. C. Mitchum, Atlanta, Ga.; J. M. Malone, Atlanta, Ga.; A. C. Evans, Macon, Ga.; J. S. Leonard, Greenville, S. C.; F. G. Mitchell, Columbia, S. C.

**TEXTILE APRON CO.**, East Point, Ga.

**TEXTILE LABORATORIES**, Box 1396, Gastonia, N. C.

**TEXTILE SHOPS, THE**, Spartanburg, S. C. E. J. Eaddy.

**TEXIE WATER ASSOCIATED OIL CO.**, 17 Battery Place, New York, N. Y. S. E. District Office, 3119 S. Blvd., Charlotte, N. C. K. M. Slocum, Dist. Mgr., Tel. Charlotte 2-3063. Sales Reprs.: L. A. Watts, Jr., 2620 Sherwood Ave., Charlotte, N. C., Tel. Charlotte 3-2558; R. C. Cook, 7710 Brookside Rd., Richmond, Va., Tel. Richmond 88-0303; W. R. Harper, P. O. Box 2204, Greenboro, N. C., Tel. Greensboro 4-6862; L. G. Crompton, Jr., No. 1 Robinson St., Elizabeth Apts., Greenville, S. C., Tel. Greenville 2-9222.

**TODD-LONG PICKER APRON CO.**, Gastonia, N. C.

**TOOL SERVICE ENGINEERING CO.**, 309 W. Crowell St., Monroe, N. C.

**TOWER IRON WORKS**, 50 Borden St., Providence 3, R. I. Sou. Reprs.: Ira L. Griffin & Sons, Charlotte 1, N. C., Tel. Charlotte 4-8306.

**U S BOBBIN & SHUTTLE CO.**, Lawrence, Mass. Sou. Offices: Charlotte, N. C.; Greenville, S. C.; Johnson City, Tenn. Texas Repr.: O. T. Daniel, Textile Supply Co., Dallas, Tex.

**U. S. RING TRAVELER CO.**, 159 Aborn St., Providence, R. I. Sou. Office and Sales Room: 1903 Augusta Rd., Greenville, S. C. Sou. Reprs.: William P. Vaughan and Wm. H. Rose, P. O. Box 1048, Greenville, S. C.; Oliver B. Land, P. O. Box 1187, Athens, Ga.; Harold R. Fisher, P. O. Box 83, Concord, N. C.

**UNITED STATES SUPPLY CO.**, 888 Broadway, East Providence, R. I. Sou. Office, care George A. Howell, 211 Rockingham Rd., Rockingham, N. C.

**UNITED STATES TESTING CO., INC.**, 1415 Park Ave., Hoboken, N. J. Sou. Branches: United States Testing Co., Inc., I. J. Yocom, Jr., Mgr., 214 Cotton Exchange Bldg., Memphis 3, Tenn., Tel. Memphis 28-1246; E. C. Cox, Jr., Mgr., 1700 Cotton Exchange Bldg., Dallas 1, Tex., Tel. Prosp. 2564.

**UNIVERSAL WINDING CO.**, P. O. Box 1605, Providence 1, R. I. Sou. Offices: 9005 W. Morehead St., Charlotte, N. C. Agents: F. P. Barrie and F. J. Barrows, 907 Whitehead Bldg., Atlanta 3, Ga. Agent: J. W. Strubling.

**USTER CORP.**, Main Office, Charlotte, N. C.; 80 Boylston St., Boston 16, Mass.

**VALENTINE CO., J. W.**, 612 S. Main St., Winston-Salem, N. C.; Box 278 Salem Station, Winston-Salem, N. C. T. Holt Haywood, Wachovia Bank & Trust Co. Bldg., Winston-Salem, N. C.

**WEEDER-ROOT, INC.**, Hartford, Conn. Sou. Office, Room 231 W. Washington St., Greenville, S. C., Frank J. Swords, Sou. Dist. Mgr.

**VICTOR RING TRAVELER CO.**, Providence, R. I., with Sou. Office and Sales Room at 358-364 W. Main Ave., P. O. Box 842, Gastonia, N. C. Phone 247. Also W. L. Hudson, Box 1313, Columbus, Ga.

**WAK INDUSTRIES, INC.**, 1814 S. Tryon St., Charlotte, N. C.

**WALTON & LONSBURY**, 81 North Ave., Attleboro, Mass.

**WARWICK CHEMICAL CO., DIV. SUN CHEMICAL CORP.** Main Office: 1010 44th Ave., Long Island City, N. Y. Sou. Plant: 907 White St., Rock Hill, S. C. J. D. Snipes, Mgr. Sou. Reprs.: M. M. McCann, Box 825, Burlington, N. C.; Minor Hunter, 1130 Skyline Rd., Charlotte, N. C.; S. Y. Strubling, Greenville, S. C.; W. S. Pearson, Frank T. Searcy, 425 Tilney Ave., Griffin, Ga.

**WATSON & DESMOND**, 301½ W. Fourth St., Charlotte 1, N. C. Repr.: John Wyatt, P. O. Box 701, Greensboro, N. C.; R. V. McPhail, 709 S. Jackson St., Gastonia, N. C.; A. J. Bahan and M. R. Woods, P. O. Drawer 779, Greenville, S. C.; Edgar A. Ball (Chemical Dept.), Charlotte, N. C.; H. K. Smith, P. O. Box 472, West Point, Ga.

**WATSON-WILLIAMS MFG. CO.**, Millbury, Mass. Sou. Reprs.: John Wyatt, P. O. Box 701, Greensboro, N. C.; Arthur J. Bahan, P. O. Box Drawer 779, Greenville, S. C.

**WEST POINT FOUNDRY & MACHINE CO.**, West Point, Ga.

**WESTVACO CHEMICAL DIV.**, 161 E. 42nd St., New York 17, N. Y. (Food Machinery & Chemical Corp.) Sou. Dist. Office: 1207 Liberty Life Bldg., Charlotte, N. C., Bishop F. Smith, Jr., Dist. Sales Mgr. Sales Reprs.: W. M. Clark, Charlotte, N. C.; Howard J. Helms, Jr., 508 Stratford Road, Avondale Estates, Ga.

**WHITEHEAD ENGINEERING CO.**, 522 W. Peachtree St., N.W., Atlanta, Ga.

**WHITIN MACHINE WORKS**, Whitinsville, Mass. Sou. Office, Whitin Machine Works Office and Plant, Dowd Road, Charlotte, N. C., R. I. Dalton, V-Pres. and Sou. Agt.; Charlotte Repair Shop, Z. C. Childers, Sales Mgr.; Atlanta, Ga., Office, 1015 Healey Bldg., B. B. Peacock, Sou. Agt.; Spartanburg, S. C., 724 Montgomery Bldg., R. W. Dunn, Sou. Agt.

**WHITINSVILLE SPINNING RING CO.**, Whitinsville, Mass. Sou. Repr.: William K. Shirley, 25 Oak St., Belmont, N. C.

**WONALANCET CO.**, Nashua, N. H., and 153 Peachtree St., Atlanta, Ga. R. C. Everett, Mgr.

# CLASSIFIED ADVERTISING

EATON & BELL  
Patent Attorneys

904 Johnston Bidg., Charlotte, N. C.  
1149 Munsey Bidg., Washington, D. C.

## GUARANTEED USED BOBBINS

You pay only for bobbins you accept as in good usable condition. Send us samples of what you need. Large stock of spinning bobbins, quills, skewers, twisters, etc.

CHARLES G. STOVER COMPANY  
West Point, Ga.

## YOU CAN COUNT ON WAK COUNTERS

Single - Double - Triple

Rotary Counters • Slasher Counters • Hank Clocks  
Pick Counters • Picker Counters • Yardage Counters

**W A K INDUSTRIES** Charlotte, N. C.



## BETTER YARN AT LESS COST

- Fewer ends down—some mills report 27% less
- Use two numbers lighter travelers for higher-strength yarn
- Polished aluminum blades stronger than steel—much lighter—cost less
- Non-slotted blades mean less wear on yarn, less lint, fewer slubs
- 7,000,000 in use by more than 400 mills

Coleman Co., Box 3597, Greenville, S. C.  
Roy Schrimshire, Box 906, Columbus, Ga.  
Matthews Equip. Co., 93A Brdwy., Prov., R.I.  
Don O'Hair, Box 8254, Charlotte 8, N. C.

## WHITEHEAD ENGINEERING CO.

522 WEST PEACHTREE STREET, N.W.  
ATLANTA 3, GEORGIA

## A. Benson (Ben) Davis

New, Used and Rebuilt Machinery

Manufacturers Agent

Appraisals and Liquidations

2710 Picardy Place

Phone 3-6661

Charlotte 7, N. C.

**BRASS PIN-PLATES**

PUT YOUR PIN TENTERS IN  
TIP-TOP CONDITION

• Pins in Stainless,  
Monel, Plain Steel  
All Diameters  
Any Length

SEND US OLD  
PLATE FOR  
QUOTATION

**SOUTHERN TEXTILE WORKS**  
P. O. BOX 406 ANDERSON, S. C.

## BROOMS

The Association of the Blind of

South Carolina

1501 Confederate Ave. Tel. 8012  
Columbia, S. C.

## OPENING FOR CLOTH ROOM FOREMAN

who has had experience in sanforizing.  
Address reply to

"X," care Textile Bulletin  
P. O. Box 1225, Charlotte 1, N. C.

## WANTED

Sales Representative for Combination Yarn  
Mill. Commission Basis.

Write "F. J. K." care Textile Bulletin  
P. O. Box 1225, Charlotte 1, N. C.

## WANTED

Superintendent Cotton Spinning and  
Weaving Mill located in the South.

Write "X," care Textile Bulletin  
P. O. Box 1225, Charlotte 1, N. C.

POSITION WANTED as overseer of weaving. 12 years' experience as overseer on Draper and C & K looms, synthetics, wool, worsted. 30 years in weave room. I.C.S. graduate. Write "W. S. W." care Textile Bulletin, P. O. Box 1225, Charlotte 1, N. C.

WANTED—Position as assistant superintendent, plant overseer or general overseer of yarn or twine mill. Experienced all phases cotton and waste manufacture, including tube twists, polluting, chenille, rug, laundry and jeans twines. Can get results. Employed. Write "C. S. I." care Textile Bulletin, P. O. Box 1225, Charlotte 1, N. C.

POSITION WANTED as personnel director. Four years college, plus textile school training. Practical experience ranging from sweeper to weave room overseer. Age 37. Some teaching experience. Write "H. R. H." care Textile Bulletin, Box 1225, Charlotte 1, N. C.

POSITIONS OPEN—MEN WANTED: Supt. worsted yarn mill; asst. mgr. rayon weav. mill; cotton-rayon, automotive fab. designers; overseer wstd. dressing; over. cot. weav. colored goods; overseers, second hands and fixers latch needle and spring needle knit. machines; put-up foreman; asst. foreman cutting and sewing; laboratory supervisor; production and development engineer for paper twine mfg.; master mechanics; mechanical engineers; industrial engineers; time study men; chemical salesmen and demonstrators; sewing mach. fixers. SEND US YOUR RESUMES.

## CHARLES P. RAYMOND SERVICE, INC.

294 Washington St.

Telephone Liberty 2-6547

Boston 2, Mass.

SPECIALISTS IN PLACING AND IN SUPPLYING TEXTILE MILL EXECUTIVES

# Before Closing Down

- TEXTILE INDUSTRY HAPPENINGS AS THIS ISSUE WENT TO PRESS -

## PERSONAL NEWS



Mr. Goldberg

Julius B. Goldberg has resigned from his position as director of research for J. P. Stevens & Co. Inc. and plans to open his own office about Aug. 1 to be a consultant for the textile industry. Mr. Goldberg had been associated with Stevens since 1937. A 1926 graduate of the Massachusetts Institute of Technology, Mr. Goldberg's previous associations include Celanese Corp. of America, U. S. Industrial Chemical Co., and S. Slater & Sons Inc.

A. G. Myers, head of Textiles Inc., Gastonia, N. C., has been reappointed by the 1953 General Assembly of North Carolina to serve on the State Ports Authority. . . . J. Harvey Moore of Charlotte, N. C., president of Brown Mfg. Co. and Roberta Mfg. Co., Concord, N. C., is a new member of the authority.

Elmer M. Templeton has resigned from Harden Mfg. Co., Hardins, N. C., to become associated with A. M. Smyre Mfg. Co. at Gastonia, N. C., as assistant to the president.

J. E. Sullivan has been named manager of industrial relations and labor standards for the textile division of United States Rubber Co. W. Lindsay Wylie has been named as his assistant and A. G. Quattlebaum has been appointed to the new position of office manager for the production management section of the division. After Aug. 1 all three men will have their headquarters in the production management section of the textile division, which is being moved from the company's New York office to Winnsboro, S. C. Mr. Sullivan succeeds R. A. All, who was promoted to a major sales position in the textile division. Since November 1951 Mr. Sullivan has been assistant manager of labor standards for the division. He joined the company in 1939 and in 1945 was made standards supervisor of Winnsboro Mills. Mr. Wylie succeeds R. R. Menti, who has been appointed assistant to the executive vice-president of U.

S. Rubber. Mr. Wylie has been with the company since June 1951 in the engineering and production departments at Winnsboro Mills. Mr. Quattlebaum joined the company in 1934 at Winnsboro Mills. He was transferred to Shelbyville (Tenn.) Mills as chief accountant in 1941 and was office manager of Seaboard Mills at Burlington, N. C., from 1947 to 1952. When Seaboard's operations were consolidated with those at Winnsboro Mills, Mr. Quattlebaum was appointed assistant office manager at Winnsboro.

Fred Starkie, associated with American Thread Co. for the past 30 years, has succeeded John S. Neely as superintendent of the processing and thread divisions of Jewel Cotton Mills Inc., Gastonia, N. C. Mr. Neely, as noted, is now general manager of Spinners Processing Co. at Spindale, N. C.

M. L. Rogers has been retired from his position as superintendent and plant manager of the Efird Division of American & Efird Mills at Albemarle, N. C., and has been succeeded by his son, H. Wells Rogers, formerly assistant superintendent. Mr.

## Our Salesmen Wear Overalls

Talk and statistics come after a demonstration of Jarrett's META-CLEAN Plan on your own equipment . . . after our cleaning experts have proven to your satisfaction that this plan cuts cleaning costs, cuts down-time, and eliminates eye-smarting and fire-inviting vapors in your mill.

Jarrett's META-CLEAN Plan is the first scientific method of keeping mill equipment and parts neat and clean at low cost. For additional information, or for a demonstration, please fill in the coupon and mail it today.



*Satisfaction Given - Not Promised*

CECIL H. JARRETT COMPANY, INC., Newton, N. C.

- Please give me a free demonstration of your META-CLEAN Plan  
 Please send me full particulars on your META-CLEAN Plan

Mill.....

Address.....

Name..... Title.....

Rogers had been superintendent of the Albermarle plant since 1925, which was Efird Mfg. Co. before its recent merger with American Yarn & Processing Co. to form American & Efird Mills.

Malcolm Campbell, dean of the School of Textiles at North Carolina State College, on the invitation of the Pakistan government, is visiting in that country to help in giving impetus to its textile industry—to advise on the type of program, type of equipment and the type of training of personnel. Mr. Campbell's visit is in connection with the Foreign Agricultural Service involving Point 4.

C. Eugene Rowe is resigning July 31 as treasurer of Burlington Mills Corp., Greensboro, N. C. Mr. Rowe joined Burlington in 1935 as an accountant; he was made controller in 1945 and treasurer in 1947. He will announce his future plans at a later date.

Recent promotions at Marion (N. C.) Mfg. Co. follow: Jimmy Fisher, from second hand to night overseer of weaving; Holden Duncan, from loom fixer to second hand; Sam Seagle, from warp hand to loom fixer; Jennings Ward, from section man to second hand.

James G. White, president and general manager of Tennessee Eastman Corp., was awarded an honorary Doctor of Letters and Laws degree by Brown University at its 185th commencement exercises recently.

H. C. Clark has been appointed superintendent and B. W. Davis assistant superintendent of the Riverside Division of Dan River Mills, Danville, Va. Mr. Clark has been with Dan River since 1935 and Mr. Davis since 1937.

#### MILL NEWS

CARROLLTON, GA.—Mandeville Mills announce that it will begin weaving screen wire probably this Fall. The operation will be located in the present supply room and will consist of 12 looms and related equipment. Widths of the woven wire will vary from 24 inches to 48 inches.

CHARLOTTE, N. C.—Highland Park Mfg. Co. and Johnston Mfg. Co. June 24 began the sale of the 300 homes in their villages. First chance to purchase the homes is being given to the occupants.

LAURINBURG, N. C.—A newly-formed corporation, Dixiana Mills Inc., has acquired the tufted cotton carpet manufacturing facilities of Scotland Mills Inc. Present facilities are being continued in operation and the existing carpet manufacturing organization and personnel of Scotland Mills is being retained by the new corporation.

DURHAM, N. C.—Abney Mills of Greenwood, S. C., has become the largest stockholder in Erwin Mills Inc. F. E. Grier, Abney president, announced that "Abney has acquired from the Duke interests another substantial block of stock in Erwin Mills Inc. which now gives Abney the desired working control which it sought in Erwin Mills." Erwin operates eight plants located at Durham, Cooleemee and Neuse, N. C., and at Stonewall, Miss.

## Index to Advertising

	Page
<b>—A—</b>	
Adams, Inc.	71
Aldrich Machine Works	39
Allen Warper Co.	89
Amercoat Corp.	4
American Viscose Corp.	55
Armstrong Cork Co.	40 and 41
Arnold, Hoffman & Co., Inc.	47
Ashworth Bros., Inc.	24
<b>—B—</b>	
Bahan Textile Machinery Co.	16 and 17
Baily & Co., Inc., Joshua L.	139
Barber-Colman Co.	6
Barkley Machine Works	132
Barreled Sunlight Paint Co.	5
Bascom-Louise, The	119
Best & Co., Inc., Edward H.	89
Biberstein, Bowles & Meacham, Inc.	128
Bridge & Sons Co., John	110
Bryant Supply Co., Inc.	103
Bullard Clark Co., The	147
Burkart-Schier Chemical Co.	126
Butterworth & Sons Co., H. W.	90
<b>—C—</b>	
Carolina Refractories Co.	128
Carter Traveler Co. (Div. of A. B. Carter, Inc.)	125
Chapman Electric Neutralizer Co.	132
Chemical Processing Co.	35
Ciba Co., Inc.	11, 12, 13 and 14
Clinton Foods, Inc.	106
Cocker Machine & Foundry Co.	127
Cole Mfg. Co., R. D.	126
Coleman Co., Inc.	97
Columbus Textile Specialty Co.	106
Creasman Steel Roller Machine Co.	130
Crompton & Knowles Loom Works	9
Crompton-Richmond Co., Inc. (Factoring Div.)	71
Cronland Warp Roll Co., Inc.	125
<b>—D—</b>	
Dayton Rubber Co., The	20 and 21
Dillard Paper Co.	51
Dixie Leather Corp.	87
Dolge Co., The C. B.	128
Draper Corp.	2
Dronsfield Bros.	133
Du Pont de Nemours & Co., E. I. Dyestuffs Division	53
<b>—E—</b>	
Eaton & Bell	144
Electric Furnace Corp.	113
Engineering Sales Co.	103
Excel Textile Supply Co.	105
<b>—F—</b>	
Ferguson Gear Co.	109
Forbes Co., Walter T.	108
Foster Machine Co.	19
<b>—G—</b>	
Gaston County Dyeing Machine Co.	56
Gastonia Brush Co.	139
Gastonia Mill Supply Co.	132
Gastonia Roller, Flyer & Spindle Co.	129
Gastonia Textile Sheet Metal Works, Inc.	42
General Asbestos Rubber Div. of Raybestos-Manhattan, Inc.	99
General Dyestuff Corp.	65
Gossett Machine Works	25
Graton & Knight Co.	87
Greensboro Loom Reed Co.	111
Gulf Oil Corp. of Pa.	28 and 29
<b>—H—</b>	
Houghton & Co., E. F.	45
Howard Bros. Mfg. Co.	7
<b>—I—</b>	
Ideal Industries, Inc.	10
Industrial Coatings, Inc.	120
Iselin-Jefferson Co., Inc.	138
<b>—J—</b>	
Jacobs Mfg. Co., The E. H. (Northern and Southern Divisions)	147
Jarrell Machine Co., W. G.	129
Jarrett & Co., Cecil H.	145
Jenkins Reneedling Co.	132
<b>—K—</b>	
Keever Starch Co.	83
Klutz Machine & Foundry Co.	113
<b>—L—</b>	
Landis, Inc., Oliver D.	127
Laurel Soap Mfg. Co., Inc.	97
Livermore Corp., H. F.	48
Loper Co., Ralph E.	132
<b>—M—</b>	
McLeod Leather & Belting Co.	18
Manton Gaulin Mfg. Co., Inc.	15
Marshall & Williams Corp.	38
M-B Products	103
Morris Fur Co.	139
<b>—N—</b>	
National Aniline Div., Allied Chem. & Dye Corp.	3
National Ring Traveler Co.	10
National Starch Products, Inc.	8
N. Y. & N. J. Lubricant Co.	Front Cover
North, Inc., Frank G.	113
<b>—O—</b>	
Oakite Products, Inc.	105
<b>—P—</b>	
Pease & Co., J. N.	126
Perfecting Service Co.	117
Perkins & Son, Inc., B. F.	93
Philadelphia Quartz Co.	116
Piedmont Machine Shops, Inc.	131
Piedmont Processing Co.	138
Precision Gear & Machine Co.	106
<b>—R—</b>	
Ragan Ring Co.	32
Raybestos-Manhattan, Inc.	
General Asbestos & Rubber Div.	99
Raymond Service, Inc., Chas. P.	144
Rice Dobby Chain Co.	89
Robert & Co. Associates	131
Rose & Co., E. F.	132
<b>—S—</b>	
Scott Testers, Inc.	130
Seydel-Woolley & Co.	31
Signal Thread Co., Inc.	99
Sinclair Refining Co.	23
Sirrine Co., J. E.	138
Solvay Process Div., Allied Chemical & Dye Corp.	99
Sonoco Products Co.	72
Southern Electric Service Co.	105
Southern Shuttles Div. (Steel Heddle Mfg. Co.)	36 and 37
Southern Textile Works	144
The Stanley Works	34
Steel Heddle Mfg. Co. and Southern Shuttles Div.	36 and 37
Sterling Ring Traveler Co.	109
Stevens & Co., Inc., J. F.	138
Stewart Machine Co.	129
<b>—T—</b>	
Tatem Mfg. Co.	118
Textile Apron Co.	109
Textile Shops, The	119
Todd-Long Pickle Apron Co.	131
Tool Service Engineering Co.	97
<b>—U—</b>	
U. S. Ring Traveler Co.	26 and 27
United States Supply Co.	113
Universal Winding Co. (Atwood Division)	75
<b>—V—</b>	
Valentine Co., J. W.	139
Veeder-Root, Inc.	Back Cover
Vesco, Inc.	113
Victor Ring Traveler Co.	59
<b>—W—</b>	
WAK Industries	144
Walton & Lonsbury	22
West Point Foundry & Machine Co.	33
Westvaco Chem. Div. Food Machy. & Chem. Corp.	66
Whitehead Engineering Co.	144
Whitlin Machine Works	43
Whitinsville Spinning Ring Co.	71
Wonalancet Co.	113



—the Lug Strap built to deliver maximum performance on high speed looms.

*Reinforced at all wear and stress points.*

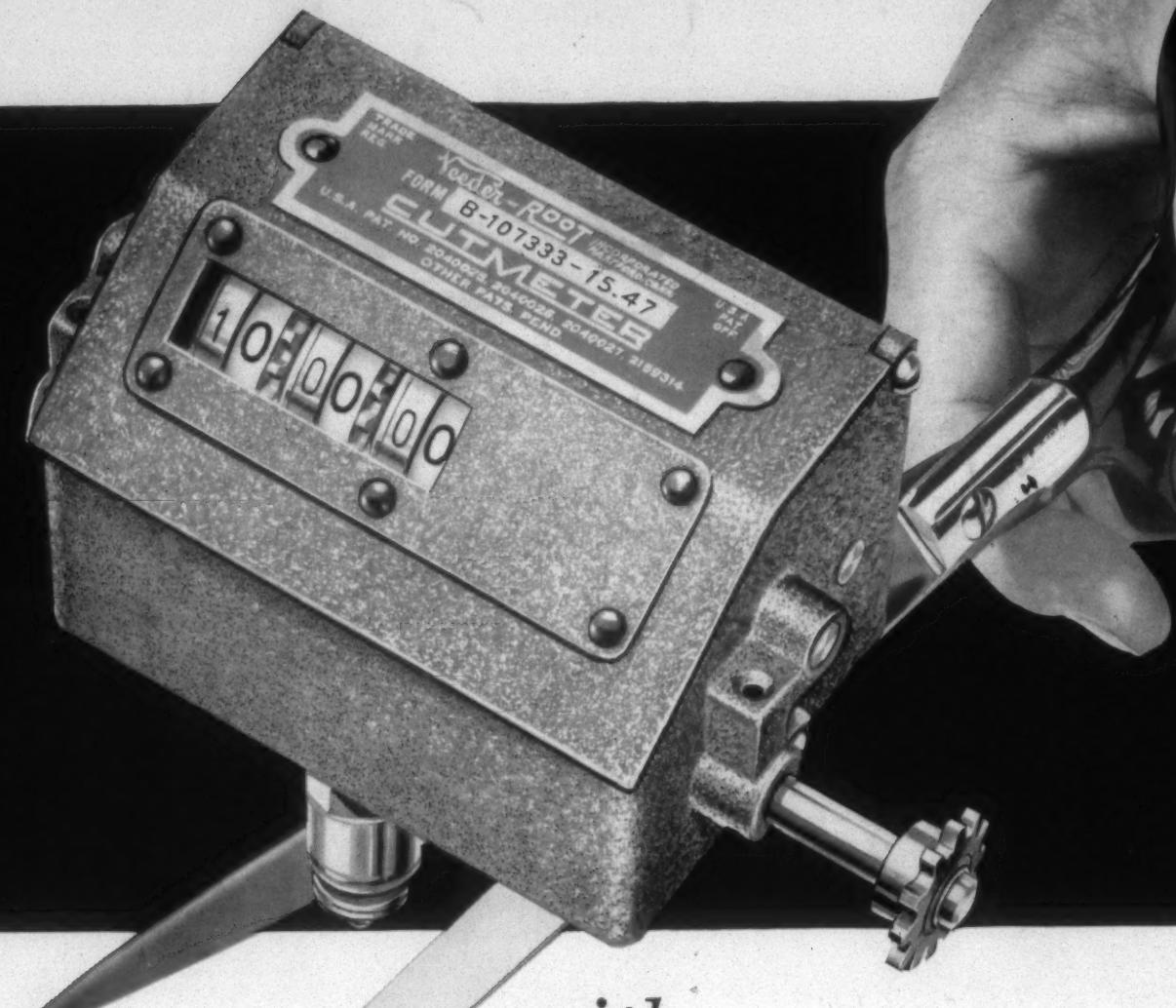
THE BULLARD CLARK COMPANY



**SOUTHERN**  
Division  
Charlotte, N. C.

**NORTHERN**  
Division  
Danielson, Conn.

# Get CUT-UNIFORMITY...



with  
**CUT METERS**  
on Your Looms

Whether your first concern is to cut down on seconds . . . to satisfy a hard-to-please market . . . or to step up the efficiency of a subsequent handling or finishing operation . . . you've got to get uniform cuts of cloth from your looms.

The simplest, most effective answer to this need is Veeder-Root Cut Meters, because they're easy to operate . . . can be made to light a light or stop the loom at pre-set woven yardage. Reading is positive and remains until reset by weaver or cut boy. What's more, Veeder-Root Cut Meters are dependable, and have earned the acceptance of leading mills.

Now, whether your particular uniformity problems are on looms, frames, twisters or preparatory equipment, you can count on "The Name That Counts" to give you the help of factory-trained Veeder-Root engineers. Just write the nearest Veeder-Root office.



**VEEDER-ROOT**  
INCORPORATED

"The Name  
That Counts"